Spring 2020

Tekison Cave: A Case Study in Archaeological Collection Rehabilitation and Accessibility

Jackey Anderson
slatkabundeva@gmail.com

TEKISON CAVE (45KT215): A CASE STUDY IN ARCHAEOLOGICAL COLLECTION REHABILITATION AND ACCESSIBILITY

A Thesis

Presented to

The Graduate Faculty

Central Washington University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

Cultural and Environmental Resource Management

---

by

Jackey Lynne Anderson

May 2020

CENTRAL WASHINGTON UNIVERSITY

Graduate Studies

We hereby approve the thesis of

Jackey Lynne Anderson

Candidate for the degree of Master of Science

APPROVED FOR THE GRADUATE FACULTY

_____ _____
Dr. J. Hope Amason, Committee Co-Chair

_____ _____
Dr. Patrick Lubinski, Committee Co-Chair

_____ _____
Dr. Patrick McCutcheon, Committee Member

_____ _____
Angela Neller, Committee Member

_____ _____
Dean of Graduate Studies

ABSTRACT

TEKISON CAVE (45KT215): A CASE STUDY IN ARCHAEOLOGICAL COLLECTION REHABILITATION AND ACCESSIBILITY

by

Jackey Lynne Anderson

May 2020

Tekison Cave is a Kittitas County, Washington, archaeological site that was excavated by avocational archaeologists in the 1970s. Part of the collection (previously never cataloged or professionally analyzed), is housed at CWU on behalf of the landowners, Washington State Department of Fish and Wildlife (WDFW). Additionally, the avocational archaeologists still possess some artifacts that they loaned to the university. The collection was rehabilitated and a recommended access policy was created, by collaborating with stakeholders: WDFW, one of the original excavators, and Native American descendant communities. For the rehabilitation, 661 bags and more than 4,406 objects were organized, cataloged, and housed following federal standards, including 295 lithic artifacts, 207 perishable artifacts, and 2,039 pieces of fauna. To meet WDFW goals, I completed a faunal analysis (which showed presence of bighorn sheep with evidence of butchery), radiocarbon dating (which provided two age estimates about 900 years ago), and sourced an obsidian biface (from Whitewater Ridge, Oregon). I interviewed an original excavator to better understand the excavation and whereabouts of artifacts. Collaboration with Native American descendant communities included

conducting an interview to incorporate indigenous views into the recommended access policy and to provide knowledge of the site. The collection can now be readily accessed and used by researchers, descendant community members, and the public, following recommended access procedures (which includes communicating with stakeholders and education).

ACKNOWLEDGEMENTS

I want to thank my co-chairs, Dr. Amason for being a constant source of encouragement and leading me into directions that I didn't know I could go, and Dr. Lubinski for the incredible amount of time, insight, and dedication he has given me. I also would like to thank committee members Dr. McCutcheon for his feedback, humor, and support, and Angela Neller for sharing her knowledge and experience with me.

I'm indebted to the Native American Descendant communities, the Colville, Yakama, and Wanapum tribes, for approving and helping me with this research, particularly members of the Colville Nation: Randy Lewis, Guy Moura, Crystal Miller, and Jackie Cook.

I wish to acknowledge the work avocational archaeologist Tom Johnson (pseudonym) did in the 1970s with Tekison Cave, as well as with me for this research. His generosity and enthusiasm are unmatched.

I want to thank Washington Department of Fish and Wildlife (WDFW) archaeologist Kat Kelly and Colockum Area Wildlife Manager Pete Lopushinsky.

I am grateful for several sources of funding for this research: supplies and travel through a Graduate Student Research Support Award awarded by the CWU School of Graduate Studies and Research, obsidian sourcing by Dr. Patrick McCutcheon, and radiocarbon dating by the WDFW courtesy of Pete Lopushinsky. Also, I want to thank the Puyallup Tribe of Indians for awarding me a Puyallup Tribe of Indians Scholarship.

My friends, old and new, have been amazing during the last two years.

Lastly, I want to thank my family, my partner Chris and, of course, my little baby Dean – I love you to pieces!

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF TABLES

LIST OF FIGURES

LIST OF FIGURES (continued)

CHAPTER I

INTRODUCTION

This thesis is at an intersection of archaeology and museum studies. Archaeological research is dependent on material culture, but archaeological research tends to focus on the information revealed from artifacts rather than the care of objects themselves. However, without physical preservation and intact provenance information, future use and research would be moot. To help the reader in understanding terms used by museum professionals, I will be defining several here. *Curation* is the long-term care and preservation of objects, which includes cataloging, documenting, providing appropriate storage, and developing policies for future use and conservation of collections (36 CFR 79 2006). For archaeological collections, that means maintaining the connection between the material remains and their associated provenience. *Access* is one type of museum policy and refers to who can use which objects under what circumstances (Simmons 2006). *Rehabilitation* is essentially the curation of a previously uncurated or abandoned orphaned or legacy collection, which brings the collection up to standards for curation so as to prevent loss of data, provenience, or materials (artifacts and samples). *Orphaned* and *legacy* collections are terms often used synonymously; however, Olson and Cathcart (2019) clarify that orphaned collections may be recently abandoned, while a legacy collection in specific is often older, with more disassociation issues. Therefore, in addition to cataloging, documenting, and properly storing objects, it often requires extensive research to re-associate information with collections. *Descendant communities,* or source communities, are the current groups of people whose heritage is tied to the objects, information, or places being studied or used (Neller 2019).

The backlog of uncurated archaeological collections in the United States has been described as the curation crisis (e.g., Marquardt et al. 1982; Voss 2012). While national voices say that there is an ethical obligation to provide access to archaeological information and collections held by public institutions (Society for American Archaeology [SAA] 1996), the existence of uncurated collections makes access to collections difficult. For example, if someone wanted to research lithics from a collection still in unsorted field bags, they would need to be properly sorted, cataloged, and housed before they could begin their research. Some institutions even specifically preclude uncurated collections from research access (Washington State University nd.). To balance use and restrictions to access, institutions create collections access policies that prescribe rules, ensuring collections are used with respect to descendant community cultural practices and the physical integrity of objects (Florida Museum 2007; National Park Service [NPS] 2016c; University of Texas-Austin 2018:25).

Research Problem

Tekison Cave (45KT215) is a pre-contact archaeological site in central Washington partly excavated by avocational archaeologists in the 1970s, with some of the collection donated at the time to Central Washington University (CWU). The CWU Tekison Cave collection is a prime example of a collection that would benefit from curation, as well as, access guidelines. Technically, a student or faculty member could go and "access" the collections housed at CWU; however, it would need to be curated to be used so provenience is not lost during analysis and results of analysis are replicable.

Additionally, part of the site's collection was retained by the avocational archaeologists, who were the only excavators of the site. Examining those artifacts and notes documenting the excavation of the site are integral to holistically understanding the site. For example Henebry-Deleon (2018) has shown that working with Columbia Plateau area collectors has undoubtedly contributed archaeological knowledge to not only individual sites and artifacts, but local and regional chronologies. Because of the involvement of multiple tribal, legal, and involved stakeholders, goals of this research are to efficiently and collaboratively rehabilitate (organize, catalog, and prepare for long-term care) the collection and determine the type of access and use recommended by stakeholders for Native American descendant communities, researchers, and the public.

This case study helps address a difficult question in the field of archaeology. When collections are essentially inaccessible in perpetuity due to being uncurated, this makes one ask: What is the purpose of housing archaeological collections and why do we continue to collect when we have a backlog of artifacts that are inaccessible (Voss 2012:148)?

Purpose

The purpose of this study is to develop and implement a process for rehabilitating and making the Tekison Cave collection accessible. Collections are not limited to artifacts, but include field documentation, reports, and records associated with the site (Childs and Sullivan 2004:14). This rehabilitation will work towards solving curation issues cited by others (e.g., Voss 2012; Marquardt et al. 1984) as persistent in archaeology and increase the increases the potential uses of the collection, for research,

education, or other meaningful pursuits. . And while I will be completing some archaeological analyses to contribute to the site's research potential, I would like to further explore how archaeological collections can and should be accessed by the public and Native American descendant communities. To achieve the purpose my objectives were:

1. To collaborate with Native American descendant communities. Incorporating indigenous views can help archaeologists understand the site (Colwell-Chanthaphonh and Ferguson 2006), the cultural value of material, and the most ethical way to provide access, from an indigenous prospective (Neller 2004:127; Rosoff 2003). Watkins (2000:177) posited that "by determining the path of the programs that study the early populations of their area, indigenous populations can influence not only outcomes of those programs but also the extent and quality of knowledge obtained." Additionally, the use of an ethnocritical approach (Zimmerman 2008), which focuses on collaboration with interested stakeholders, has seen success in field archaeology and may benefit curation and laboratory work as well (Roth 2016).

2. To reconnect with the original excavators of Tekison Cave. My goals were to ask outstanding questions related to artifacts and documentation, find out what they envision for the future of the collection, identify and describe any artifacts that may be privately held that could be analyzed or photographed for future accessibility (for example, online as a digital record like the Burke Museum's [2019] collections).

3. To consult with the site landowners on collections management and retrieve any information they have on the site so that recorded information may be synthesized.

4. To rehabilitate the Tekison collection, which requires research, re-associating and reconciling information, cataloging, and rehousing following accepted standards of curation (e.g., NPS 2016a; Simmons 2006). Cataloging is the process of recording information and assigning numbers to objects so they can be reconnected to information. Housing collections refers to the environment and type of material used to store objects; the optimal conditions differ based on object material type (NPS 2016a). Reconciliation is re-associating provenience with artifacts and resolving information discrepancies (Finch 1988)

5. To meet the requests of the landowners, complete archaeological analyses including a faunal analysis to contribute to the site interpretation.

Significance

Prior to beginning this research, bulk materials recovered from Tekison Cave by avocational archaeologists had been held by CWU for decades, but were not curated. Early efforts of CWU to curate the collection showed that it contained artifacts with research potential, such as faunal remains. Also, the location or condition of most individual artifacts cataloged and documented by the avocational archaeologist (Johnson 1972-1975) from Tekison Cave was unknown. According to the report *Excavation at the Tekison Rockshelter* (Johnson 1972-1975), there were hundreds of manufactured artifacts like projectile points and matting. The perishables, rare in the archaeological record, contributed to the interest in rehabilitating and making the CWU-held collection accessible as well as trying to locate the presumably avocational-held collection.

There have been numerous examples of the benefits of making collections accessible (e.g., Arendt 2013; Chan 2010, Philips 2004); however, there are fewer cases detailing how institutions determine who can access and use collections. There are valid reasons to limit access; however, it has been argued that for collections to be considered beneficial, they should be utilized (Carman et al. 1999). Documenting this collection's rehabilitation and the creation of an access plan will enable methods to be applied to archaeological collections at CWU and beyond.

The Tekison Cave site itself is significant as it is listed on the National Register of Historic Places (Kelly 2014). Based on an avocational archaeologist report cited in the Tekison Cave site form, projectile points recovered by the original excavators may be associated with the Cayuse phase circa 2000-350 BP (Kelly 2014). However, because of the non-professional nature of the stone tool analysis, it is important that some analyses following reviewed methods be completed to validate or alter previous interpretations of the site. Analyses of this collection in particular will strengthen our knowledge of mid-Columbia River archaeology for numerous reasons. In my initial examination of the collection, the plant material and faunal remains from the cave site are amazingly well preserved, with some of the faunal remains even having connective tissue on them. A pilot study of just a sample from the site revealed numerous animal bones with evidence of human modification as a result of stone tool use (Anderson 2019). There are also currently few other examples of upland site collections from the area (Shea 2012). Furthermore, the avocational archaeologists did not excavate the entirety of the cave and therefore, its undisturbed layers possibly contain earlier materials (Smith and Welch 1976).

Organization of Thesis

Chapter II is a summary of pertinent museum and curation issues and policies relating to archaeological collections. Chapter III has several components: to briefly explain the environmental setting of Tekison Cave; to detail the cultural context of the Mid-Columbia Plateau region through archaeological, ethnographic, and historic sources; and to go over the few pieces of gray literature previously available (with restricted access) about Tekison Cave. Chapter IV describes the research methods I use. Chapter V is a detailed description of the site's avocational excavation and avocational-held collection through research of unpublished documents and collaborations with the avocational archaeologist. Chapter VI documents the history and rehabilitation of the CWU-held collection and the creation of an access plan. Chapter VII details archaeological analyses completed. Chapter IX goes over collaborations with descendant communities and recommendations for access and use. Chapter IX, the conclusion, has a summary of materials, comparisons to other Plateau sites, reflection on collaborating, and recommendations for further research, including potential uses of the rehabilitated collection.

CHAPTER II

THE CARE OF ARCHAEOLOGICAL COLLECTIONS

Tekison Cave is an archaeological collection that needs to be rehabilitated and made accessible. To guide the methods used in those endeavors, this chapter presents practices in curation and collections management. First, understanding the curation crisis will reiterate the significance of this project and its place in the context of curation issues in archaeology. Second, reviewing literature on rehabilitating archaeological collections will assist in establishing and executing a plan to curate the Tekison Cave collection. Third, access to collections encompasses a broad spectrum of issues including collections management planning, laws and ethics, and indigenous descendant community collaboration.

The Curation Crisis

Marquardt et al. (1982:409) define curation as comprehensive management procedures including sorting, cataloging, housing, and making collections available. Improperly curated collections prevent access, impede conservation, and are described as a crisis in the field of archaeology (Childs and Sullivan 2004; Marquardt et al. 1982; Voss 2012). Inaccessible collections make research challenging, if not impossible.

While curation issues may exist in other countries, the term “curation crisis” has largely been attributed to the state of collections in the United States (Childs and Sullivan 2004). Contributions to the nation’s curation crisis include projects completed as a result of programs that resulted in recovery of artifacts, such as the New Deal of the 1930s (Sullivan et al. 2008) and the National Historic Preservation Act (NHPA) of 1966. These

programs focused on fieldwork and rarely budgeted for proper curation or future use, resulting in institutions amassing more collections than they could properly care for (Marquardt et al. 1982:410). Another contribution to declining curation standards was the institutional shift of archaeology, described by Childs and Sullivan (2004) as follows. In the early 1900s, archaeologists were commonly employed and trained by museums. Throughout the decades, archaeologists more commonly became part of academic departments and, therefore, were less trained in collections care. With the focus on field archaeology and analysis, collections management is now seen as a separate field and there tends to be little cross-training.

The lack of overlap between archaeology and collections management has been noticed and efforts to change have been made. Notably, standards and laws for curation in archaeology have improved. By 1996, the Society for American Archaeology (SAA) included accountability for archaeological collections in its ethical guidelines (Childs and Sullivan 2004:3). In 1990, Regulations at 36 CFR 79 (2006) regarding curation of federally owned and administered archaeological collections, set national guidelines for curation (Marquardt 2004:172). While it is required of *federal* collections, other entities, like Washington State (DAHP 2019a), have adopted the same standards.

With these newer guidelines in place, can it be claimed that there is still a crisis? Anyone who has wandered into a basement or closet of an institution with collections knows there is still a lot of work to be done curating and making collections accessible. Personally, at several institutions in the last few years, I have witnessed many problems including rodent-chewed storage boxes, unlabeled artifacts, and improper storage environments. However, Warner and Childs (2019) cite Marquardt's more recent, 2004,

statement that the state of collections care has increased over the decades since Marquart et al.'s 1982 call to action to solve the curation crisis. Warner and Childs (2019) now shift the narrative away from stressing the catastrophic problems of the curation crisis to highlighting the solutions that have and can be used for curation. While there is still a backlog of collections that need curation, archaeologists have many resources to do so.

Rehabilitating Archaeological Collections

As previously stated, there are numerous resources that can be used to guide curation practices. These resources cover a range of collections management topics. In this section I first note resources commonly used by archaeologists and museum professionals. Secondly, to guide rehabilitation methods, from these sources I focus on the basics of curating an orphaned collection: researching associated records, cataloging, and storage.

Publications that focus on archaeological collections include *Curating Archaeological Collections: From Field to Repository* (Sullivan and Childs 2003), *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship* (Childs 2004), and *Using and Curating Archaeological Collections* (Childs and Warner 2019). Additionally, *The National Park Service (NPS) Museum Handbook* (NPS 2016a; 2016b; 2016c*)* is a reference that is free to access online. The three volumes cover management, preventative conservation, and use. It includes archaeology-specific sections, and, as a federal publication, is a good resource for information to meet 36 CFR 79 requirements. Also, there are many guidelines distributed by repositories that meet 36 CFR 79, often used by cultural resource management (CRM) firms to prepare collections

for these places (e.g., Arizona State Museum 2004, Burke Museum 2018a). Other useful sources that are not archaeologically specific include *Museum Registration Methods* (Buck and Gilmore 2005) and *Things Great and Small: Collections Management Policies* (Simmons 2006).

Generally, curation is one component of the collections management cycle. In a modern excavation, there are three stages before curation begins: 1) project planning, 2) fieldwork, and 3) processing, analysis, and reporting (Majewski 2019). However, with an orphaned collection, stages 1 and 3 may have been skipped, uncomprehensive, and/or the information from these stages was disassociated from artifacts. This may lead to questions integral to cultural, educational, and research value, such as: Which site did these artifacts come from? Who is the legal owner? and What is the provenience of these objects? Therefore, completing a rehabilitation of an orphaned collection requires finding and researching as many associated records as possible. Associated records are defined by NPS as "original records (or copies thereof) that are prepared, assembled and document efforts to locate, evaluate, record, study, preserve or recover a prehistoric or historic resource" (36 CFR 79). Examples include field notes, photographs, oral histories, and deeds, either from original fieldwork or from historical research (36 CFR 79).

Marino (2004) posits that coalescing and rehousing are required to re-associate information with artifacts and return research potential to a collection. Marino (2004), Voss (2012), and McFarland and Vokes (2016) all contribute similar steps to re-associating information, as follows. The process is an inventory of sorts. One should thoroughly inspect both the collection and associated records. Besides the types of artifacts present, it is important to note any information on the box, on bags, or labeled on

artifacts themselves to help rebuild site and provenience information. It is also important at this step to not contribute to further disassociation. For example, if you are at the stage where you are unsure if two boxes contain material from the same site or provenience, it is important to not mix materials between the two boxes. After the collection and associated records have been examined, one can cross-compare data. One should look for substantial evidence that data from the collections and documentation match, like site numbers, provenience system notations, or previous catalog numbers. This is significant in the case of decades-old artifact boxes that have had little collections management. It is very possible other site material has been admixed or that boxes were re-used and the contents do not match the box labels.

When one is confident, they have the correct artifacts and associated records, the materials can be sorted and rehoused. Every orphaned collection will have unique needs depending on how it has been previously handled. Additionally, an institution's collections management policy will determine sorting and cataloging conventions. At the very least, sorting should be done by broad material class for preventative conservation, object type for cataloging, and within-site provenience (Sullivan and Childs 2003; Marino 2004; NPS 2016a). As an example, the NPS (2016b) has several broad material classes: animal, composite, human remains, mineral, unidentified material, or vegetal. The object type, also known as object name, or material type, would be the narrowest designation the artifact will be cataloged under. Examples include flake, cordage, and knife (NPS 2016b).

During this sorting process, all artifacts should stay associated with their information. A good way to do this is to start making catalog tags as soon as sorting

begins. Original, or field tag/bag, information should be transferred onto the archival catalog tags and kept with any bags used. For example if an original, labeled field bag contains multiple material types that need to be separated, each separated material should have a catalog tag with all information transferred from the original. The original field bag or tag should be saved and somehow associated with sorted materials (MacFarland and Vokes 2016). There are various ways to do this including writing field specimen numbers or catalog numbers on the back of the field bag or creating a copy to keep with each new artifact bag (MacFarland and Vokes 2016). Other information generally cataloged includes: accession number, catalog number, description, quantity, weight, cataloger name, catalog date, excavation date, within-site provenience, site name, site number(s), condition, and storage location (Sullivan and Childs 2003, NPS 2016b). In addition to having catalog information on catalog tags that stay with artifacts, there is usually a hard-copy master catalog which is entered into a database (MacFarland and Vokes 2016).

Connected to retaining information is processing associated records. While at some institutions this is carried out separately by an archivist, for many working with collections this is another required task. Drew (2004) explains the basics of associated records. There are five basic mediums: paper, photographic materials, audio/visual, oversize/cartographic, and electronic. The agents of deterioration that damage susceptible artifacts tend to affect records even more so. They include sunlight, acid, and temperature. This must be considered when handling and storing records. The five steps in processing are arrangement, storing, labeling, cross-indexing, and creating a finding

aid. The organization used is subjective and varies based on institutional needs and abilities.

Rehousing can be done both during the sorting process and after cataloging. Sullivan and Childs (2003) and NPS (2016b) give the following recommendations for storage. The type of containers used depend on artifact condition and size, as well as facility capabilities. However, they must be archival quality, which generally includes acid-free papers, cotton, and polyethene products. Artifacts that are not delicate may be stored in polyethene bags with catalog tags printed on archival paper. These bags should be stored together by material class, such as in an acid-free box. The size of the box and organization also depends on weight and fragility of artifacts. Heavier artifacts can be easier to handle in smaller boxes. Using interior trays can take pressure off of delicate artifacts like obsidian, while efficiently using space.

In addition to the scientific framework of preventative conservation, special considerations for cultural care must also be taken into account. Neller (2004) emphasizes that archaeologists are ethically obliged to collaborate with descendant communities, not just during fieldwork, but in curation as well. Traditional care practices vary from region to tribe, so communication is essential to finding out best practices. While use is further described in the next section, it is important to note that the concepts of care and use may not be as indistinguishable as they are understood from a western standpoint. For example, while repositories tend to limit handling of objects as a form of care, some cultural views actually necessitate frequent handling, with the belief that those objects are alive (Neller 2004).

Access and Use Policy

As explained above, the lines between different collections management policies are often blurry. With access and use often being intertwined with curation, it is essential to discuss these concepts with regards to rehabilitation and solving the curation crisis. Simmons defines access and use as policies that "generally establish who can have access, to which collections, in what manner…, for what purposes, and with what safeguards" (2006:111). Simmons (2006) further states that institutions holding objects in the public trust must provide access to collections. However, determining access policies can be difficult. There are practical barriers, such as staffing and preservation issues. Additionally, the ethics of what should be accessible and to what groups is more complicated, especially for archaeological or ethnographic collections. This is because they both often share the colonial legacy where objects were collected by, and for, cultural outsiders.

Childs and Sullivan (2004:16) identified six needs to improve access and use. First, they state publications and "gray literature" (limited distribution technical reports) need to note where artifacts and documents discussed are located and descriptors to locate them in the future. Second, gray literature needs to be disseminated. Third, when possible, archaeologists should use existing collections before excavating additional materials to test new hypotheses. Fourth, universities should promote collections research. Fifth, museum collections should be available through online catalog databases or publications. Sixth, professors should teach stewardship of collections to students.

There is no set-in-stone method for determining access to collections. It is delineated in regulations for Curation of Federally-Owned and Administered

Archaeological Collections (36 CRF 79 2006) that a federal repository "makes the collection available for scientific, educational and religious uses, subject to such terms and conditions as are necessary to protect and preserve the condition, research potential, religious or sacred importance, and uniqueness of the collection."

Following the 36 CRF Part 79's guidelines and Childs and Sullivan's (2004:16) six needs for access, I argue there are three main groups to consider during access: i) descendant communities, ii) researchers, and iii) the public at large.

i) Descendant Communities. Increasing access to collections can be especially impactful when it comes to descendant communities. In North America, appropriation and control of material culture began from the time Europeans first arrived (Onciul 2015:27; Sleeper-Smith 2009). There has been a push for decolonization within museums by increasing collaborations with descendant communities, so they have more control over and access to their heritage (Lonetree 2012:20; Onciul 2015:164).

Although I will be working with an archaeological collection, in the United States there is a fine line between ethnographic and (non-historic) archaeological collections (Swain 2007:80). While the original method of recovery of these types of objects often may be different, the issues surrounding meaning, cultural value, and ethics of ownership and access are similarly discussed (Swain 2007:291; Lonetree 2012:19). Therefore, ethnographic and archaeological collections are both discussed.

Sven Haakanson Jr. (2004:4) notes that the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 led to increased involvement of American Indians with museums. However, objects that do not fall under NAGPRA should still be utilized by American Indians to recover lost knowledge (Haakanson 2004:4). For

example, Krista Ulujuk Zawadski (2018), who describes herself as an Inuk, conducted research on traditional bone needle cases (kakpiit) at the National Museum of the American Indian and was able to demonstrate how making the collections accessible contributed to cultural revitalization. Other examples include those from the Smithsonian's Recovering Voices program, which seeks to use collections for research and outreach to revitalize endangered indigenous knowledge (Smithsonian Institution 2020).

In addition to allowing descendant communities to access their heritage, their voices should be heard to determine how others can access them. It is becoming more widely acknowledged that some material culture is considered private or sensitive to American Indians and requires thoughtful, specialized handling and display practices (Gazi 2014; Neller 2004:124; Nordstrand 2004:12).

Nordstrand (2004:13) differentiates between consultation and collaboration. Consultation is basic outreach and informing of a project, for example a letter describing a planned exhibition. Collaboration is a more integrated process where the institution as well as tribes are involved for the benefit of both groups, resulting in indigenous parties being more likely to work with those institutions again (Nordstrand 2004:13; Roth 2016; Swan and Jordan 2015:47). Onciul (2015:72) describes collaboration as an "engagement zone," where stakeholders negotiate power over ideas and objects. Results of engagement zones can include community inclusion on museum boards and employment as well as partnerships in creating exhibits, events, and policies (Onciul 2015:72). Onciul (2015:72) stresses that collaboration can be emotional and impactful in dynamic ways and cautions that engagement can have both positive and negative outcomes.

ii) Researchers. Voss (2012) asserts that curation is not just a prerequisite to collections research but is a research endeavor in its own right. Voss (2012) argues that engaging with "orphaned" collections, which have been uncurated or unresearched, can illuminate unexpected information, which in turn can incite new research questions. Besides investigating previously undocumented orphan collections during the curation process, Frieman and Janz (2018) argue that re-examining analyzed collections with new perspectives allows for updating knowledge of the past. According to Barker (2004:26) investigation of *in situ* archaeological sites is a destructive, finite form of research, while collections research produces more knowledge the more it is done.

iii) The Public at Large. Philips (2004) argues that archaeology should be brought back to the public, who pay for it in the case of collections held in public trust. Chan (2010) describes how the public can engage with archaeological exhibits to learn about the material past and the archaeological process in a critical way. Responsible access does not have to be limited to traditional exhibits. The Burke Museum (Philips 2004), in collaboration with local tribes, developed educational archaeology "kits" that could be loaned to local schools and community organizations. Additionally, public archaeology can utilize collections for job training programs (Arendt 2013).

Curation guidelines are generalizations that fit the needs of most objects and collections. However, there are specialized needs based on cultural practices that must be considered. Following standard practices with input from collaborations can lead to collections being used in a way that is beneficial to multiple groups. So, this thesis documents rehabilitating and making an archaeological collection accessible. The next chapter will begin to describe the context for the collection at the heart of this thesis.

CHAPTER III

TEKISON CAVE SETTING

This chapter first broadly explains the previously documented biophysical, archaeological, ethnographic, and historic context of the region where Tekison Cave lies. The site, in Kittitas County, Central Washington, is part of a large environmental and cultural area known as the Columbia Plateau, or Plateau. Within this area are unique environments and groups of descendant communities that are discussed in relation to the site. Secondly, the limited amount of documented archaeological information on the site itself will be summarized.

Biophysical Context

Tekison Cave is located in the Washington state-managed land area called the Colockum Wildlife Area in the uplands between the Columbia River and Yakima River valleys. Overall, the 105,662-acre area is arid with steep basalt canyons and slopes (WDFW 2006). It is west of a 15-mile stretch of the Columbia River, with several perennial and permanent streams, typically draining to the east. The wildlife area has a large elevation range from 480 to 6,875 feet, which results in varying vegetation; the lower elevations consist of shrub steppe which transitions into Ponderosa pine, while the higher elevations consist of Douglas and grand fir intermixed thinly with larch (WDFW 2006). Plants in the sagebrush-dominated shrub steppe region include hedgehog cactus, rose, snowberry, and serviceberry (WDFW 2006). According to the *Handbook of North American Indians* (Hunn et al. 1998:535), these and dozens of other plants were used for food, medicine, technology, and traditional practices by native groups of the Plateau.

Native fauna found in the Colockum Wildlife Area were utilized by people before European contact (Hunn and Selam 1990:139) and today, the region is still used for hunting and fishing. The Colockum Wildlife Area management plan (2006) details current species noted in this paragraph. Mammals in the wildlife area include elk, bighorn sheep, deer, and jackrabbit. Birds include, eagles, and grouse. Migratory salmon were historically known to inhabit the streams and creeks in the area but, culverts have made many of these reaches inaccessible to salmon today (WDFW 2006). Resident fish, such as rainbow trout, still remain in scarce numbers (WDFW 2006). According to Miller (1998:255-257) the Middle Columbia River Salishans would catch fish May through August and hunt mammals in the fall and winter for food, clothing, and other materials.

Cultural Context

Culture areas are often generalized, and the Plateau is no exception. The large culture area begins on the eastern slopes of the Cascades, going east to the Rocky Mountains, and extends south into Oregon state and north into Canada (Walker 1998). Walker (1998) lists key characteristics of Plateau culture as: seasonal rounds and riparian settlement patterns; reliance on fish, roots, and some game; heavy intermarriage and trade throughout the area; village and band-level organization; and similar art, religion, folklore, and customs.

Archaeological

Phases commonly used in archaeology to describe cultural periods in the Mid-Columbia Plateau were defined by Nelson (1969) and further expanded on by others

(e.g., Galm et al. 1981; Lohse 1985). While Clovis tools are recognized to exist on the Plateau (Mehringer and Foit 1990; Frison 1991), their scarcity has resulted in them being left out of dominant regional chronologies. Galm et al.'s (1981) chronology has five phases (from oldest to youngest): Windust, Vantage, Frenchman Springs, Cayuse, and Historic, and the following summary is taken from this chronology discussion. The Windust phase ranges from around 11,000 to 8,000 radiocarbon years before present (BP). It is characterized by mobile hunter-gatherers and use of the Windust point, which is stemmed and often has an indented base. The Vantage phase ranges from around 8,000 to 4,500 BP). It is characterized by increased riverine subsistence and use of the unstemmed Cascade point, followed later by the Cold Springs Side-notched point. The Frenchman Springs phase ranges from around 4,500 to 2,500 BP, roughly covering three of Nelson's (1969) phases: Cold Springs, Frenchman Springs, and Quilomene Bar. During the Frenchman Springs phase a change in settlement pattern is shown by evidence for an increased population, more sedentism, pithouse villages and upland hunting and gathering. There is also an increased variance in material culture, with several diagnostic points, including Rabbit Island Stemmed and the Columbia Corner-notched variety A.

The Cayuse phase ranges from around 2,500 to 350 BP (Galm et al. 1981). Evidence points to seasonal rounds and winter village patterns during this time (Ames et al. 1998). Projectile points in this phase are increasingly varied and tend to be smaller than proceeding phases; they include the Columbia Stemmed and Wallula Rectangular-Stem (Carter 2017). The Historic, or Ethnographic, phase occurs after European contact around 350 BP (Carter 2017). Previous point styles like Columbia Corner-notched remained while several new styles occurred (Nelson 1969). Culture and traditional ways

of life were greatly impacted by European introductions of new technologies, diseases, and conflicts (Hunn and Selam 1990).

While information on Tekison Cave itself has not been disseminated, there are some known significant archaeological sites nearby. Tekison Cave is northeast of another inland site, Grissom Site (45KT301), which lies in the Kittitas basin. This was likely the location of "Che-lo-han" where multiple Plateau bands and tribes congregated yearly in the spring in the nineteenth century (Parfitt and McCutcheon 2017; Schuster 1998:328). The nearby Grissom site shows evidence for heavy use throughout the Cayuse phase, into the historic period (Shea 2012:138-139).

There is another well-known site southeast of Tekison Cave, the Sunset Creek site (45KT28), which was documented extensively by Nelson (1969) along the Columbia River near Vantage. The now-inundated site is on the north area of the Quilomene Bar and yielded projectile points from the Vantage, Frenchman Springs, and Cayuse phases. Numerous organic artifacts were also found including bone awls, an antler comb, and shell beads. Additional information on cordage and matting from rockshelters on the Quilomene Bar were included as an appendix in the Sunset Creek Site report (Nelson 1969). Of the seven rockshelters, only one was officially designated (45KT48).

The sites in closest proximity to Tekison Cave have not been examined beyond surface survey, briefly described on site forms and in survey reports. The following table (Table 2.1) lists the nine sites documented on WISAARD within 1 mile of Tekison Cave. All but 45KT2756 are located within the same drainage. They are mostly small lithic scatters and stone tool isolates; however, there are also several rock features. Within a quarter mile of the cave, close enough to speculate they may have a connection to the

cave, are cairns (45KT3733) and a talus pit (45KT3732). Talus pits are known to have several possible uses, including storage, hunting blinds, burial markers, and spiritual purposes (Hutchins and Simons 1999; Ripin 2017; Smith 1910). Cairns also have several possible uses such as to mark places like trails and important sites, to commemorate events, or to signify cached objects (Chartkoff 1983; Kelly 2008; Ray 1963).

Table 2.1. Sites Located Within One Mile of Tekison Cave.

Site Number	Distance (miles)[1]	Site Type[2]	Description of artifacts/features (source)
45KT3732	0.25	Rock feature – talus pit	Individual pit is 1 x 1 x .5 in a south-facing talus slope (Kelly 2014c).
45KT3734	0.25	Lithic Scatter	20 square meter area includes debris with clear modification features (platform, bulb of percussion, etc.) and several cores (Kelly 2014e).
45KT3733	0.25	Rock feature - Cairns	Four cairns, the largest being 1.5 x 1 x .8 m. (Kelly 2014d)
45KT2753	0.30	Precontact camp	Biface fragment (black CCS[3]), wedge, perforator, fine-grained basalt chopper/core, CCS flakes, and petrified wood chunks (McKenney and Emerson 2007).
45KT2754	0.40	Precontact camp	Several modified flakes, a uniface, worked basalt pestle, perforator (McKenney and Emerson 2007).
45KT2751	0.50	Precontact isolate	Stemmed projectile point, estimated age Cayuse phase (McKenney and Emerson 2007).
45KT3731	0.75	Rock feature – talus pit	Location and morphology suggest use as hunting blinds (Kelly 2014b).
45KT2756	0.85	Precontact lithic material	CCS core and debitage (McKenney and Emerson 2007).
45KT2755	1.00	Precontact camp	Uniface, core/wedge, perforator, projectile point/knife, debitage (McKenney and Emerson 2007).

[1] Distance as measured using the measurement tool in WISAARD
[2] Information from site form
[3] CCS= cryptocrystalline silicate, like chert

Historic and Ethnographic

In this section, I first describe the several neighboring Plateau tribes near Tekison Cave and their use of the area, and detail historic uses of the land. Tekison Cave is located on land ceded by the Yakama Nation under the Yakama Treaty of 1855 (Yakama

Nation 2000) and is also in the traditional use area of the Moses-Columbia band of the Confederated Tribes of the Colville Reservation (Confederated Tribes of the Colville Reservation 2018). The *Handbook of North American Indians* shows the site in the territory of the Sinkayuse (Miller 1998:Figure 1), while the Kittitas and Wanapum bands had territories west and south of Tekison Cave, respectively (Schuster 1998:Figure 1).

Spier (1936) shows general southern Columbia Plateau tribe locations at contact on a map without the use of boundaries. I have added a star to this map showing the approximate location of Tekison Cave in relation to tribal areas (Figure 2.1). Sinkinse, Sincayuse, or Sinkayuse are some of the numerous variations used to name the group Teit (1928) refers to as the Columbia tribe.

Plateau groups' settlement patterns were principally aligned with rivers (Anastasio 1972). Tekison Cave lies in an area near where Sahaptin and Salish-speaking tribal groups' traditional ranges meet (Anastasio 1972; Hunn and Selam 1990:60). According to Teit's (1928:93) ethnographic research, by the 19th century, the Columbia Salish-speaking group occupied a range on the west and east banks of the Columbia River from the mouth of the Wenatchee River to Priest Rapids and extending east through the Plateau. The Wenatchi, who were also Salish speaking, resided just north of the Columbia Tribe. However, Ray (1936:119) described the Wenatchi territory as extending further south, just over where Tekison Cave is located. He does note that movements of the Interior Salish were fluid and hunting was done across historically delineated boundaries. In 1878, Chief Moses of the Columbia requested a reservation boundary that included the western boundary of the Columbia River (Ruby and Brown 1995), where Tekison Cave is situated. While Columbia and Moses-Columbia are used

interchangeably in many publications, Moses-Columbia is commonly used when referring to the group historically and presently. Chief Moses was a celebrated leader of the Columbia from the mid-1800s to his passing in 1899 (Ruby and Brown 1995).

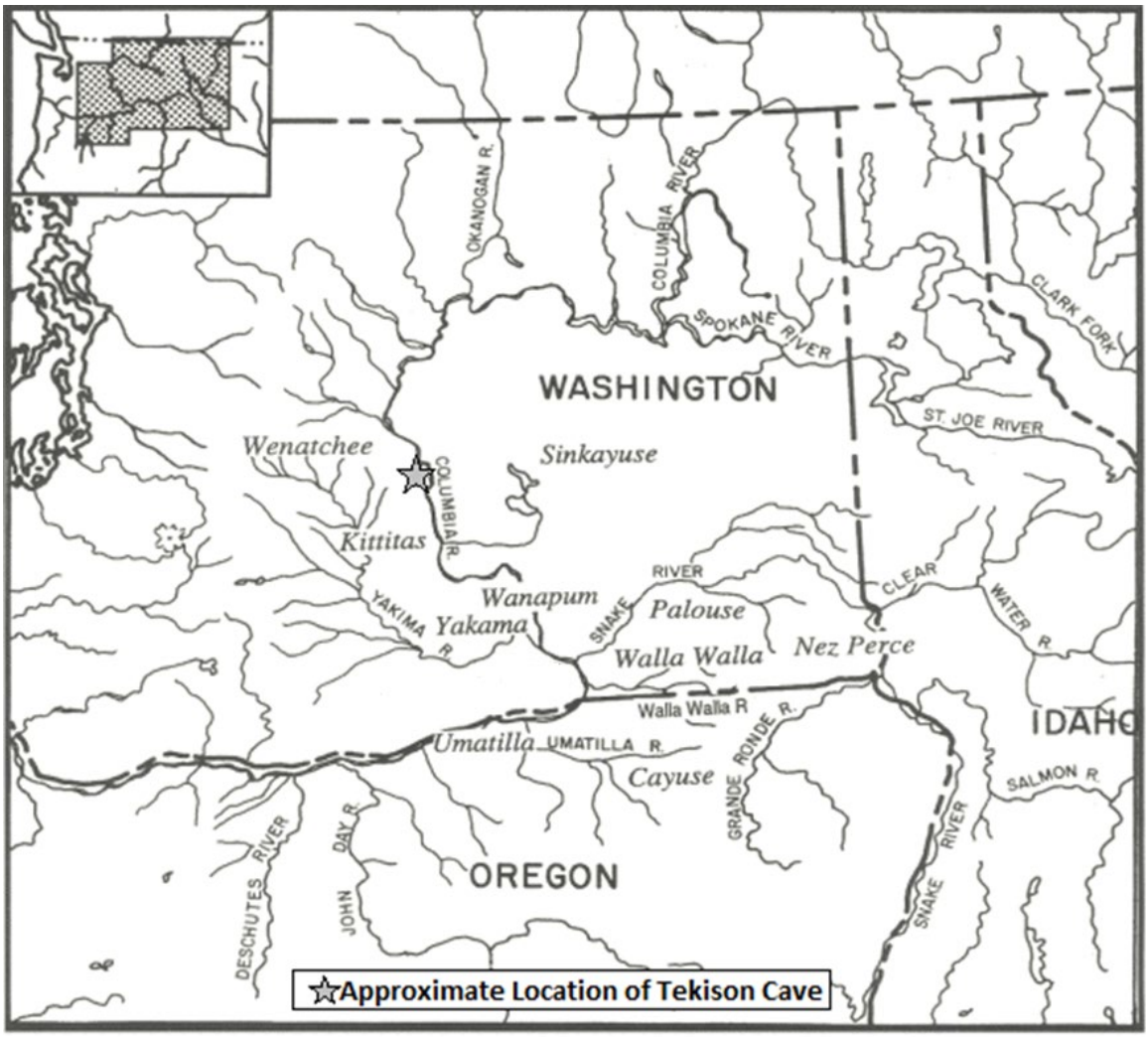


Figure 2.1 General overview of tribes located on the Southern Columbia Plateau. Modified from Boxberger and Rasmus (2000 np.).

Teit (1928) described the Wenatchi and Columbia together as the Middle Columbia Salish. The following paragraph summarizes his ethnographic research from *The Middle Columbia Salish* (Teit 1928*)*. He notes that most of the information he gathered was from Moses-Columbia people, then living on the Colville reservation. Some

Moses-Columbia included the Wenatchi as part of their group, but the majority recognized them as separate. While the two groups were Salish-speaking, the Wenatchi name is likely a Sahaptin word. Pisquow is a Salish term that may be used referring to the Wenatchi. Before smallpox and other diseases were introduced, the Columbia had a considerable population, estimated in the thousands. The Wenatchi and Columbia had some intermarriage with coast Salish groups, including Cowlitz and Snoqualmie, but more so with neighboring interior Salish and Sahaptin speaking groups. Stone tool manufacture was common, especially west of the Columbia where raw material was greater. Bone tools included wedges, needles, awls, projectile points. Weaving was also common and was similar in style to the Thompson. Twine was made of both hemp and sinew. Mats were made of tule, rush, and bark. The most common bark was willow, followed by sage.

While the Wenatchi and Moses-Columbia were displaced from their homeland, mostly relocating to the Colville reservation, elders still shared knowledge of their ancestral areas (Anglin 1995). In 1946, then-chief of the Moses tribe, Billy Curlew, gave a tour of "Big Bend" country and at one point described the general area west of the Columbia near Tekison Cave used by mid-Columbia Salish**:**

> Most of the river opposite this point, the valley was called Coma-quat-ka. The Moses Band used to winter along the Columbia because of the abundance of driftwood for heating and cooking fires. West across the stream called Ta-pis-kin [Tarpiskan] issues from a canyon extending back into Na-faithkin-mountain. One mile up this stream from the Columbia are some falls where there used to be good fishing for salmon. The Indians also raised potatoes and corn in the stream valley.

> Communication with Coma-quat-ka was by means of a trail that passed above a basalt cliff that drops precipitously into the Columbia. Downriver from Coma-quat-ka another stream called na-qual-a-qual-main joins the Columbia from a canyon in the mountain to the west. This also used to be a fine fishing stream [Anglin 1995:250].

Chief Curlew goes on to talk about use of both sides of the river in this area: "In addition to the large camps mentioned [south of Moses-coulee mouth and south of Vantage], the Sinkiuse had smaller winter camps on almost every flat river bar on both sides of the river from Wenatchee south to Beverly" (Anglin 1995:29).

South and west of these approximate Interior-Salish territories were the Yakama, Kittitas, and Wanapum, people who spoke Sahaptin (Hunn and Selam 1990:61-63). In general, besides a different language and territory range, Sahaptin people shared many cultural practices with the Salish, including basketry, annual rounds, and reliance on root gathering, fishing, and hunting (Miller 1998; Schuster 1998).

In the mid-1800s settlement by non-native people accelerated and the area was overtaken for exploits such as mining, ranching, and farming (McKenny and Emerson 2007). The Kittitas County Records Office has records of the parcel that Tekison Cave is located on back to the year 1961 and by that time it was owned by the Department of Fish and Wildlife (Christy Garcia, personal communication, 2019). Today the site is part of the Colockum Wildlife Area managed by the Washington Department of Fish and Wildlife. The state-owned Colockum Wildlife Area land was acquired around the 1950s, being purchased from several private landowners, including the prominent Coffin family (WDFW 2006), although it is unclear if the Tekison Cave was part of Coffin family land

prior to the establishment of the wildlife area. According to the avocational archaeologist (personal communication 2019), the cave was known about by others including a range rider in the area. Range riders were open-range ranchers and herders who came into the region starting in the 1860s and 1870s (Anglin 1995).

Tekison Cave Prior Research

There are only two pieces of information pertaining to the site that are easily available to archaeologists (who must be approved to gain access through Washington Information System for Architectural and Archaeological Records Data [WISAARD]). The first is the site's National Register of Historic Places nomination form (Smith and Welch 1976) and the second is the most recent site form (Kelly 2014).

The story of the nomination of Tekison Cave, as follows, was shared to me by Dr. William Smith (personal communication 2020). Smith, CWU Professor Emeritus, was a friend and former teacher to the avocational archaeologist. In the early 1970s Dr. Smith visited the cave with the avocational archaeologist. Several years later, Dr. Smith was in touch with then State Historic Preservation Officer Lou Guzzo and State Archaeologist Jeanne Welsh. After telling Welsh about the cave, she suggested Dr. Smith draft a memorandum to nominate Tekison Cave to the Register. Helicopter transportation was provided by the National Guard for Guzzo, Welch, and their team to accompany Smith to visit the cave. Smith shared that he continues to believe the site has potential for early deposits of great research value, underlying the surface layers impacted by collectors, separated by a layer of undisturbed rockfall.

The following information comes from the nomination form (Smith and Welch 1976). The cave is 32 meters wide, 16 meters deep (from the opening to the back wall), and approximately 2.5 meters tall. The cave is basalt with a floor composed of basalt rockfall and windblown silt. The cave was excavated to an average depth of 80 centimeters by avocational archaeologists. Artifacts recovered from the site include projectile points, textiles, and plant material. It was reported that the late period projectile points found represent technology made from around 2,000 years ago to the ethnographic period, during the Cayuse Phase. The site's significance argued in the nomination form was the potential wealth of information as an interior site, as most well-documented sites are along major rivers due to salvage efforts. Lastly, the portion of the cave that was excavated yielded spectacular and numerous artifacts, yet there is still a large portion that was unexplored.

The site form (Kelly 2014) largely repeats information found in the NRHP nomination form, but also adds the current conditions of the site. At the time of the 2014 visit, by Katherine (Kat) Kelly (current WDFW archaeologist) and Pete Lopushinsky (Colockum Area Wildlife Manager), many historic remnants of the avocational excavation remained in place. An excavation screen, (whose photo bears resemblance to the avocational archaeologist's screen from the 1972 [Figure 2.2]), was removed. Some other remnants were left in place, such as grid markers, which may be useful in future archaeological investigations. It also was noted that location of excavated artifacts was unknown, but they were assumed to be privately-held and that CWU was working on finding them.

A summary of the previously unpublished history of site investigation, including the findings of this thesis, avocational excavations, and revisits, is provided in Chapter V.

Figure 2.2 Comparison views of site from 2014 and 1972. Left: excavation screen present during site visit in 2014 (Kelly 2014). Right: Excavation screen present September 1972 (Photograph D Frame 6).

Orphaned collections may or may not have contextual information. Luckily, in this case, there was documentation associated with the collection, so the site location could be known. The contextual information of an orphaned collection is important for reasons including corroborating information and determining stakeholders. Now that the context has been set, the next chapter discusses the methods employed in this thesis.

CHAPTER IV

METHODS

The following combination of methods were used to achieve the goal of rehabilitating the Tekison Cave collection and creating an access and use policy. The methods attempt to incorporate multivocal and indigenous archaeological models (Colwell-Chanthaphonh et al. 2010) in an effort to incorporate descendant community views. Following these discussions are details for archaeological analyses performed on a sample of the site materials for this thesis.

Stakeholder Determination and Collaboration

To collaborate with stakeholders, the first method was to identify stakeholders, clarify their relationship to the collection, and see if they were able or willing to collaborate. The methods for collaboration were to explore each stakeholder's relationship with artifacts, how stakeholders envisioned access and use, what roles they would play in the curation process, and how this project could result in outcomes that benefit stakeholders. As this research involves human participants, before moving onto Objective 2, I submitted my proposal to the Human Subjects Review Council (HSRC) and completed any necessary requirement, including completing an Institutional Review Board (IRB) application.

Stakeholders were defined based on the site location in comparison with tribal territories, the history of excavations, and land ownership, based on the literature review and archival research. As Tekison Cave is currently on state-owned land, Colockum

Wildlife Area Manager Pete Lopushinsky and Department of Fish and Wildlife Archaeologist Kat Kelly were found to represent the legal owners of the collection. The tribal groups I reached out to are the Confederated Tribes of the Colville Reservation, the Confederated Tribes of the Yakama Nation, and the Wanapum Band of Priest Rapids, based the cultural context including treaties and ethnographic research, and oral history, discussed in Chapter III. Also, CWU has been building relationships and communicating with these three descendent communities about proposed student and faculty research with archaeological collections in this general location. I sent letters to officials in tribal archaeology departments, informing them about my project and the potential for their involvement. To open lines of communication with the original excavators I employed a chain referral method after Bernard (2011:147). I began talking with CWU professor emeritus William (Bill) Smith, who recorded the site and nominated it to be on the National Register of Historic Places. He, and his wife Martha Duskin-Smith, offered to connect me to the family of avocational archaeologists who excavated the site.

To collaborate with tribal groups I worked with my committee to send communications on my project and potential archaeological analyses and to develop open-ended questions (Appendix A) for interviews. Open-ended questions lead the interview around predetermined topics, while allowing room for responders to expand and elaborate in directions they choose. The topics were about the desired roles indigenous groups wish to have with the curation process, how they view the objects in the collection, and their recommendations for access. Additional questions asked if there was knowledge of the site they wished to share. Tribal representatives for the Yakama and Wanapum were responsive to inquiries about archaeological analyses; however, they

were unable to respond to interview requests. The Colville also supported proposed archaeological analyses. Additionally, Guy Moura, Manager, History/Archaeology Program Tribal Historic Preservation Officer of the Confederated Tribes of the Colville Nation, responded to my interview request by suggesting instead that their office receive my questions and they conduct a search for potential knowledgeable elders. Their office located a knowledgeable elder, Randy Lewis, who agreed to be interviewed in Wenatchee, Washington. Tribal Traditional Cultural Property Sr. Coordinator Crystal Miller facilitated the interview by passing along my questions, photographs, and some other site information so that Randy could be prepared. Additionally, I brought several artifacts with me to discuss during the interview.

To collaborate with the original excavator, I conducted semi-structured and open-ended interviews after Bernard (2011:157) over several months (Table 4.1). Like open-ended interviews, semi-structured interviews allow for responder flexibility. However, questions are more structured to seek a concrete response to a specific issue. I asked open-ended questions about how the excavation was conducted and technical questions related to field notes (Appendix D). While the excavation of the cave during the 1970s had more than one participant, I primarily worked with one of the original excavators. To protect their request that their family remain anonymous, I will refer to them and others as follows: (1) the principal contact and avocational archaeologist will be named Tom Johnson, (2) his participating brother with whom I also spoke will be named Sam Johnson, (3) his father will be named Lenny Johnson, (4) his family will be the Johnson family, and (5) an associated participating family will be the Coopers.

Table 4.1. Timeline of Collaboration with Avocational Archaeologist.

Date (2019)	Event
June 6	Initial meeting with Tom Johnson
June 10	Meeting and first set of artifacts loaned by Tom Johnson
June 12	Site revisit
July 26	Meeting and second set of artifacts loaned by Tom Johnson
August 2	Meeting with Tom and Sam Johnson
October 10	Meeting with Tom Johnson
October 21	Meeting, interview, and third set of artifacts loaned by Tom Johnson

Also, I sought permission to document and analyze any artifacts that were privately held. Tom Johnson gave permission for the artifacts to be on long-term loan, therefore I documented the artifacts he held and created a long-term loan document. For artifacts he was not in possession of, I asked for further sources to help track down where artifacts may be now.

As the WDFW is the site landowner, I consulted with Kat Kelly, state WDFW archaeologist, on my findings and recommendations for collections access. In addition to email communication, I met with Kat Kelly, Dr. Lubinski and Dr. Amason on January 22, 2019. I also attempted to meet WDFW research goals for the collection and/or cite goals as recommendations for future research. Their goals were:

1) Sort out if avocational archaeologists are willing to talk or collaborate

2) Analyze and photograph a sample of site artifacts

3) See if avocational archaeologists would be willing to donate collection

4) Sort and document the CWU-held collection

5) Discuss how cultural material was used

6) Dating and sourcing of materials.

These goals were important for creating objectives and methods, especially for rehabilitating the collection, collaborating with the avocational archaeologists, communicating with tribes, and completing archaeological analyses.

Additionally, Pete Lopushinsky, offered to arrange a visit to the site. With permission from tribes, in June 2019 there was a site revisit with the following people: Pete Lopushinsky, myself, Dr. Lubinski, Dr. Amason, Dr. Steve Hackenberger (CWU archaeology faculty), and the avocational archeologist. A site visit is an usual opportunity for collections-based research. However, in this circumstance there were several reasons why it was pertinent. The avocational archaeologist had not been to the site in around 50 years. The trip was important for evoking memories of the excavation. It was also a chance to build rapport with Tom Johnson. Additionally, at the request of the Yakama Nation, we completed a site revisit with photos to report on the current condition and determine if there had been any recent vandalism. The majority of the photos taken included shots that duplicated photos from the most recent site form (Kelly 2014). Surface artifacts were also tabulated, and many were photographed. The avocational archaeologist was able to give a narrative of the excavation and answer some questions. Details on results of the site visit are in Chapter V.

Create and Implement a Model for Rehabilitation and Access

To develop a model for rehabilitation and access I completed a literature review to be able to follow legal standards and best practices of curation and collections management (see Chapter II "The Care of Archaeological Collections"). I combined these professional archaeological and museum practices (e.g., NPS 2016a; Simmons

2006; Terry and Childs 2019) with input gathered from stakeholders. Rehabilitation to meet 36 CFR part 79 (2006) included cataloging and housing (properly boxing and storing) objects as well as compiling data and archives and creating electronic copies. Sorting, cataloging, and rehousing were done carefully to ensure information was not lost. Sorting of bulk materials was completed by prioritizing bags with provenience.

The work I completed to rehabilitate the CWU-held collection was complicated and meticulous. In the following paragraphs, I briefly describe what was done. For a complete description of the process, including the history of collection's management and use, see Chapter VI "Rehabilitation."

When I was first introduced to the project, the collection held at CWU was in three stages of curation: unsorted in original bags, sorted into new bags, and unsorted in new bags. The boxes were stored in Farrell Hall in a CWAS (Central Washington Anthropological Survey, formerly Central Washington Archaeological Survey) workroom and in the collection storage room. The material that was sorted was not previously assigned catalog numbers, but some were tied to a "CWAS bag number" from which it was pulled. Previous work by graduate student Lauren Walton in 2014 labeled the materials by box as having provenience, poor provenience, or no provenience. For some of the materials, the site provenience was unclear, so there was also the possibility some material was from an entirely different site. After exhausting information from current resources, materials with uncertain site origin were treated with conservatism. It was decided to leave these out of the rehabilitation until a site origin was confidently determined (see Chapter IX, subheading "Further Needs and Uses for the Collection").

Catalog tags and forms were created to efficiently retain any information available (Appendices B and C). Rehabilitation of the physical collection was done in following steps: sort by material (see Table 4.2), assign catalog numbers to objects, write information on catalog tag and form, re-bag materials in appropriate bags with catalog tag, and enter information into a database. A cataloging notebook was kept to record extra details and methods such as catalogers and initials, descriptions of photos if taken, disposal of non-artifactual material, etc. Catalog data for materials clearly from the Tekison site were entered into a Microsoft Access database for the site. This site database is of the same kind Dr. Lubinski has been using for other department catalog projects since 2000, and also includes faunal analysis records for each site that has had such analyses.

I supervised five undergraduate and graduate students to assist with this process. I trained them in proper cataloging and handling techniques and gave them pertinent site information so they could successfully contribute to the rehabilitation.

Associated records and photographs were scanned so they can be stored and used electronically. The unpublished documents (Johnson 1972-1975) include an artifact catalog for around 250 artifacts, an excavation report, plan maps and profile maps. Both the information from those documents and data from interviews were compared to collections to determine if any materials with missing proveniences could be determined to be from Tekison Cave and re-associated with provenience information.

Table 4.2. List of Material Types Used in Cataloging 45KT215.

Type	Code	Material Description
Faunal	B	faunal remains (unspecified)
	BB	faunal remains-- bone (non-fish)
	BF	faunal remains-- fish
	BS	faunal remains-- shell
	D	dropping/scat/fecal matter
Vegetal	W	wood, root, or other perishable non-artifact material
	C	C-14 / charcoal sample
	E	perishable artifact (unspecified)
	ET	perishable artifact-- textile
	F	fill / float sample / sediment sample
Stone	L	lithic (unspecified)
	LB	lithic-- chipped stone biface (not point)
	LO	lithic-- chipped stone core
	LD	lithic-- chipped stone debitage
	LG	lithic-- ground stone
	LP	lithic-- projectile point
	LT	lithic-- thermal alteration (not chipped or ground)
	TL	tool/ornament- lithic (not chipped)
Other	O	other sample
	T	tool/ornament- (unspecified)
	UM	unsorted material (could include lithics, bone, charcoal, shell, etc.)
	H	historic artifact/debris (unspecified)

Archeological Analysis

Archaeological analyses were completed to contribute to knowledge of the site, reach goals presented by WSDFW, and corroborate findings by the avocational archaeologists. The analyses completed were a sample faunal analysis, radiocarbon dating of bone, and obsidian sourcing.

The first analysis was a sample faunal analysis in Winter 2019 for Anth 425 “Zooarchaeology” with Dr. Lubinski. The main focus of the analysis was to determine if there was a presence of faunal material due to human activity as well as what types of

fauna were represented. Because the analysis was completed before the collection was rehabilitated, I used a convenience sample. That is, I chose from the set of original field bags that had not had any previous organizational work and were clearly from Tekison Cave. Out of this set, I selected bags at random, concurrently analyzed and cataloged each bag as I went, with the goal of analyzing around 200 specimens. The sample size reached was 170 specimens.

To complete the faunal analysis, I used Dr. Lubinski's recording system, described in his course reader (Lubinski 2019:159-178). Information from the hard copy analysis data sheets was input into a Microsoft Access database. For taxonomic identification I utilized Dr. Patrick Lubinski's comparative collection of modern specimens at CWU, plus some specimens on loan from the Burke Museum, and written material by Lawrence (1951). The species considered for comparison were presently or historically known mammals to exist in Washington, based on information from the Burke Museum (2014). Traits identified included side, element, portion of element, taxonomic class, taxon below class (as appropriate), and bone fusion. If mammal taxon could not be identified specimens were placed, as possible, into a six-size mammal class system (see Table 4.3).

Table 4.3. Mammal Six Size Class System.

Class	Weight	Examples
1	<100 g	mouse, vole
2	100-700 g	squirrel, pika
3	.7-5 kg	rabbit, fox
4	5-25 kg	coyote, otter
5	25-200 kg	pronghorn, deer, sheep
6	200-1500 kg	elk, bison, horse

Note: Size classes 1-5 from Thomas (1969), size class 6 defined by Lubinski (2019).

Taphonomy was also recorded. Taphonomy is described by Andrews (1990) as environmental influences on the "accumulation and preservation of fossil faunas" (Andrews 1990:vii). However, Lyman (2010) argues that human modifications are included in taphonomy, so long as they are done after the death of an organism. The possible recordings for taphonomy and other traits were burning, weathering, root etching, breakage, maximum length to cm, and modification. Identification was done with a hand lens at 7x.

Bone surface modifications were compared to Fisher (1995). Cutmarks from stone tools have a distinctive shape, usually with a v shaped cross section (Fisher 1995:12). Scrapemarks have many tight, parallel striations from the edge of a stone tool (Fisher 1995:18). Chopmarks also tend to exhibit a v-shape, but are shorter and deeper than cut-marks (Fisher 1995:19). Impact notches and flakes, like lithic flakes, are made from a striking force on the bone, often with a hammerstone (Fisher 1995:21). A technique using an anvil may also produce anvil marks (Fisher 1995:21). Non-anthropogenic modifications included carnivore and rodent gnawing and digestion. Marks or punctures whose origins were not discernable were not recorded in tabulations, but noted in comments. All identifications were reviewed by Dr. Lubinski and entered into the database for easy tabulation. Using the database, minimum number of individuals (MNI; White 1953) and number of identified specimens (NISP; Payne 1975) were calculated.

For specimens identified to the genus with intact teeth, I attempted to determine animal age at death by recording tooth wear and/or crown height. For the elk mandible (catalog [cat] #1587), I recorded crown heights and wear patterns to get an estimate for

the age at death. For crown height age estimates, I used formulas by Klein at al. (1981) and Steel and Weaver (2012). For wear patterns I used Payne (1987). For sheep specimen (cat #s: 183, 184, 1001, 1008, 1018, 1044) wear patterns I drew schematics after Payne (1987) and Todd et al. (1996), and recorded wear scores using Payne (1987), and wear stages from Reitz and Wing (1999:Figure 6.8c) after Grant (1982:94). I estimated age using Lyman (2017) and Stiner (1990).

Two bone specimens were chosen for radiocarbon (C14) dating, with permission from tribes. This was funded by the WDFW, and performed by the DirectAMS laboratory in Bothell, Washington. As this analysis is destructive, I took care in documenting the specimens before sending them for dating. I photographed the bones with a scale and recorded metric and non-metric traits described in the faunal analysis methods. The specimens were chosen based on stakeholder (specifically WDFW) and research interests. Both specimens needed to meet criteria of being large enough for the destructive analysis. For unburned bone, this requires a specimen of at least 2 grams (DirectAMS 2019).

The first specimen chosen was relevant to modern land management. Pete Lopushinsky was especially interested in elk. The only specimen determined to be the species *Cervus elaphus* (elk) was a mandible, catalog number 1587 (Figure 4.1), recovered from 13G at a depth of 19 inches. Because the original specimen was much larger than necessary (86.51 grams), Dr. Lubinski decided to remove a smaller portion to send for the destructive analysis. A section of the bottom distal portion of the cortical bone was taken off using a Dremel cut off wheel and pliers. This smaller section was re-

cataloged as #1589. The weight of this removed portion was 6 grams and the dimensions were 39.44 x 26.25 x 6.72 mm.

Figure 4.1. Cat #1587 elk mandible before removal of portion to be sent for C14 dating. Scale is 10 cm.

The second specimen was chosen based on provenience to contribute to the temporal affiliation of the site. Having a specimen recovered from the greatest depth would give an idea of the oldest deposits with artifacts recovered. Additionally, a bone with evidence of human modification, like a green break, was required in order to ensure that the dated bone was archaeological (modified by humans) instead of paleontological. The chosen specimen was catalog number 1588. It is a long bone flake of a size 5 (sheep-size) mammal, with a green break, weathering stage 0, root etching 0, a small amount of adhering tissue, light in color, 37.1 x 14.91 x 9.67 mm in dimension, and 3.05 grams (see Figure 4.2).

Figure 4.2. Cat #1588 bone fragment sent for C14 dating.

There was a goal to source any obsidian from the site, to contribute to the WDFW's wish to understand the material culture of the site, and due to Dr. Patrick McCutcheon's interest in obsidian source information (Kassa and McCutcheon 2016; Parfitt and McCutcheon 2017). Only one obsidian stone tool was found in the CWU-held collection, catalog #1460. This tool (Figure 4.3), a bifacially-flaked tool, was photographed, sketched, examined macroscopically and microscopically, and documented. Documentation included paradigmatic classification after McCutcheon (1997) and obsidian physical properties after Kassa (2014). It was sent for obsidian sourcing to Northwest Research Obsidian Studies Laboratory in Corvallis, Oregon.

Figure 4.3. Cat #1460 obsidian bifacially-flaked tool (Nyers 2020:4). The depicted side has some cortex on it, while the obverse side lacks cortex. Photo scale is 1 cm long.

CHAPTER V

AVOCATIONAL EXCAVATION

In this chapter, I first detail my collaborations with the avocational archaeologist and discuss connections to the changing views on values and practices of avocational archaeology. Second, as a result of compiling data from interviewing the avocational archaeologist and researching associated records, I describe the excavation that occurred in the 1970s. Third, Idescribe the 2019 site revisit. Fourth, I discuss the state of the avocational-held collection. Lastly, I reflect on these results in the context of ethical discussions of avocational archaeologist collaboration.

Avocational Archaeologist Collaboration

After reviewing the contents of the CWU-held collection and comparing it to Tom Johnson's (1972-75) report, "Excavation at Tekison Rockshelter," it quickly became apparent that a lot of artifacts, especially formed tools and textiles, were missing. The CWU-held collection consisted of at least ten boxes of mostly unsorted material and only 18 of the 219 artifacts formally cataloged in the 1970s (Appendix E) were found in CWU-held collection. Additionally, many notes from the report (Johnson 1972-1975) needed explanation. It was clear that connecting with the avocational archaeologists would be integral to the collection's rehabilitation and research. As previously stated in purpose and methods, my goal in connecting with them was to complete interviews for better understanding the excavation and the artifacts from the site.

There has been an ongoing ethical debate in archaeology for decades on working with avocational archaeologists and collectors (e.g., Douglas 2017; Kelley 1963; Masse and Gregonis 1996; Nickerson 1972; Pitblado 2014). While there are several terms used often synonymously to describe non-professional retrieval of archaeological information, there is at least some distinction. Looting, similar to terms like pot-hunter and collector (Kelley 1963), is defined by Elia (1997) as "deliberate, destructive, and non-archaeological removal of objects from archaeological sites" (Elias 1997:86). The term collector, is however, often used with more positivity than the term looter (e.g., Douglas 2017; Pitblado 2014). Amateur archaeology, or avocational archaeology, is distinguished from looting by its motive (desire to learn) and technique (excavating with some level of organization and data collection) (Kelley 1963; Masse and Gregonis 1996; Nickerson 1972).

Elia (1997) emphasizes archaeological knowledge as systematically retrieved and archaeological resources as non-renewable. It is implied there is no second chance to recover archaeological information from a looted site. While it may be true that there is no true opportunity to complete excavation up to today's ethical and scientific standards, others (e.g., Douglas 2017; Pitblado 2014) state there is still an opportunity to understand the past through artifacts and information obtained by avocational archaeologists and collectors. In researching Tekison Cave, after talking to landowners, tribes, and with the agreement of my co-advisors, I took the ethical position of collaborating with avocational archaeologists to gain a better understanding of the archaeological record.

As a culmination of months of planning, anticipating, and waiting, a June 06, 2019 a meeting with Tom Johnson, the avocational archaeologist of Tekison Cave, was

formalized. In attendance were Dr. William Smith, Martha Duskin-Smith, Tom, Dr. Amason, Dr. Lubinski, and myself. For the first meeting with the avocational archaeologist, I brought things from the CWU-held collection in order to facilitate memory as well as to build trust and a relationship. Included were a handful of artifacts and field tags, as well as a printed poster of the sample faunal analysis I completed for the Anth 425 Zooarchaeology class. While it was rumored that he possessed artifacts from the site, I had no idea if he would bring anything or how open to discussion he would be. He arrived with a weathered binder that had "EXCAVATION REGISTER" handwritten on it, as well a photo of the cave, which he showed immediately. The simple gesture of bringing objects showed that he had kept these items as placeholders for memories and that he was open to reconnect and share his recollections.

The avocational archaeologist had many anecdotes to share. Some were pertinent to the excavation itself. The excavation was a family affair. Tom was a young adult at the time. His parents had been collectors in the region for some time. While Tom grew up collecting as a family pastime, he also became a student of archaeology. He studied at CWU (then Central Washington State College), took a field school with Dr. Smith, and contributed to collections work at the Department of Anthropology. So, having been an archaeology student, Tom wished to influence his parents' collecting habits so that provenience information would not be lost. The parents did take some field notes during their collecting, but nowhere near as comprehensive as today's archaeologist would like. About his parents' collecting habits, Tom shared that his dad "Lenny" had multiple sites and didn't label anything; Lenny stated that he didn't need to label anything because he had the memory of where everything was from. However, Tom then tested his dad's

memory by showing him a projectile point and asking him where it was from. The point was from Tekison Cave, however his dad replied with the name of some unrelated site. Tom flipped it over and showed him the label and that it was from Tekison. “From then on, he started labeling,” Tom said. These experiences helped drive the methods used by the family in the excavation of Tekison Cave.

Aside from the family excavation, Tom, who was a recent Vietnam veteran, found solace in just spending time in the area. He said, “71-72 was the combined effort [family excavation], then I went by myself.” He described going to Tekison Cave numerous times and called it “a wonderful, wonderful place.” Tom recalled on “one of my adventures…the sun was in my eyes, I was a long ways from anywhere…,” his truck had broken down on the way to the dig site, so he hiked back to the river and left a note on another man’s truck and “walked all the way to my cave.” This man found the note and relayed a message to Tom’s brother Sam, who came to help. The man later told Tom, “I don’t know why something told me to check on my truck.”

Mid-way through the June 6 meeting Tom said “I’m gonna drop a bomb on you, I have a whole box of stuff…. I want you to have everything I have.” He was in possession of some artifacts from the site that he wanted to bring to CWU, including horns and cordage.

We arranged several more meetings at CWU throughout the summer of 2019 (Table 4.1). These were primarily attended by the avocational archaeologist, Dr. Lubinski, and myself. During these meetings Tom loaned CWU all 45KT215 artifacts available to him (see Appendix E), which we informally discussed. At one of these meetings we were also joined by Tom’s brother Sam, who also added some information. I

also conducted a formal interview with Tom following an interview guide (Appendix D "Avocational Archaeologist Interview Guide"). These meetings contributed to understanding the excavation, which I will describe next.

1970s Excavation

The information in this section has been compiled through interviews and research with associated records in the CWU collection (Appendix F) as well as records on loan from the avocational archaeologist (Appendix G). Some information was duplicated in multiple sources, while others were bits and pieces gathered from different ones. For clarity, I will only cite the specific source for quotations. Uncited information is understood to be summarized from the unpublished available records and interviews. As previously stated, I refer to the primary avocational archaeologist as Tom Johnson, his family as the Johnsons, and their family friends as the Coopers.

Tom was introduced to Tekison Cave through his parents, who learned of the cave through the Coopers, friends of theirs who were also collectors. In 1969 the Coopers were shown the cave by a range rider. Before being named Tekison Cave, the site was referred to as "Big Cave." Early documentation of the site used the code "BC" to stand for this early name. Later, the code "TC1" for Tekison Cave was used. Additionally, it is referred to as Tekison Rock Shelter, or [name of the avocational archaeologist]'s cave. It has been clarified that these names and codes all in fact are 45KT215.

On a second visit to the site in 1969, the Coopers retrieved a blue Russian bead and piece of z-string cordage from the surface. They may have collected additional artifacts. Four of the Johnson family members first visited the cave July 19, 1970. At this

time, Tom was not present. A portion of the upper end of the site was excavated using a shovel and a screen. They found a grass layer approximately three feet below ground level, which they assumed to have been brought in by people. There is some documentation of these artifacts in the "Excavation Register," loaned to CWU by Tom Johnson.

On June 19th 1971, Tom began excavations with his family. The Coopers also participated several times. While some record of artifacts the Coopers collected is available, if provenience was recorded, it has not been found. However, under direction of Tom, the Johnson's excavation records were fairly comprehensive, especially for the 1971 season and somewhat for the 1972 season. The following description of the excavation done in 1971 comes from the report "Excavation of Tekison Rockshelter" (Johnson 1972-1975):

> Excavation in the Tekison Rock Shelter was started in the rear portion of the site. This was done to prevent back filling of non-excavated areas and also because there was considerable less rockfall present on the surface. The site was marked off with two sets of parallel lines, each of the sets intersecting the other at right angles. A wire was strung across the back of the cave to provide temporarily as a boundary line. This wire was kept level by the use of a hand level. As artifacts were discovered, they were catalogued in the day book as to the location in the grid found and measurement below the wire. This method of recording was only used temporarily to keep the beginning records. On September 5, 1971, a hand held optical level was found to be much more practical and accurate in

determining the depth of artifacts. This level was placed upon a camera tripod in the area of 6E [an excavation unit]. The sight was not leveled with the ends of the wire so the same height would be maintained. The distance in inches from the wire to the surface of the Rock Shelter was thirty-four inches. This same height was maintained through-out the excavations at the Rock Shelter and served as a datum line. The wire was marked off into three foot lengths from the number six to twenty seven. An imaginary perpendicular line to the wire was numbered from A to U in three foot intervals. This completed the grid system which was used in Tekison Rock Shelter.

The site was excavated from June until September 1971 with the use of small tools, such as picks and racks. The dirt which was ready for sifting was then carried by bucket to the screens. After sifting, what remained in the quarter inch mesh screen was carefully inspected. Immediately upon finding an artifact it was sketched and catalogued (according to grid and depth found) in the day book. The artifacts were then placed in plastic bags with tags which corresponded to the day book. With the information in the day book, the artifacts were then re-cataloged according to the individual collections [Johnson 1972-1975:2].

These methods were largely followed during 1971 and 1972, although there are some artifacts recovered these years with provenience listed as “unknown” or with other uncertain descriptions. The grids (see Figure 5.1) ranged from letters A to U designating an east-west line (A being the furthest east at the back wall, going west towards the

mouth of the cave) and numbers 5-27 designating a north-south line (5 being the furthest north at the left wall, going south towards the right wall).

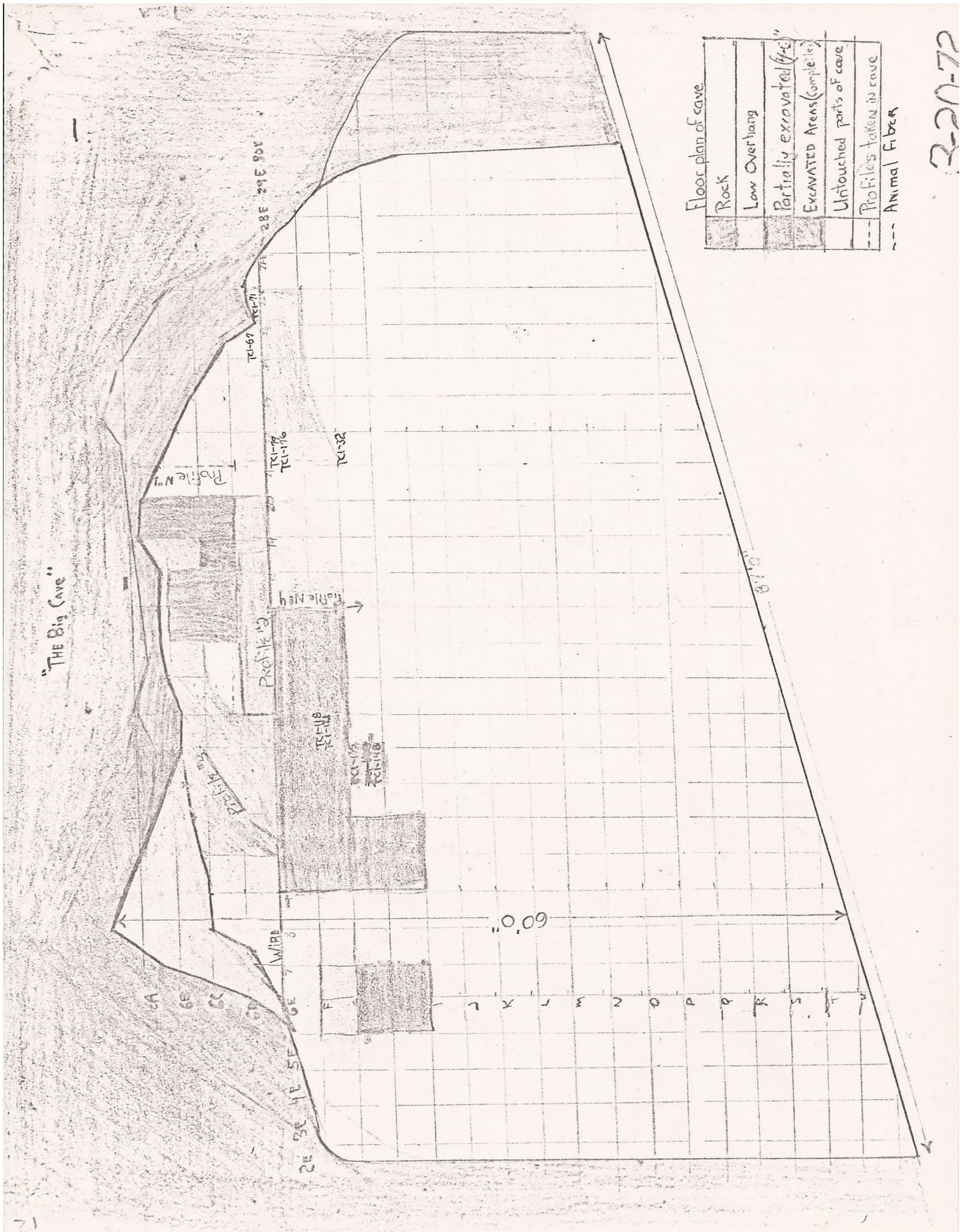


Figure 5.1. Plan map of excavations from Johnson's (1972-1975) report. Grid north is to the bottom of this view (it is towards the left cave wall). Indicated are units excavated and location of profiles 1-4. Dated 3-20-72.

Four profiles were documented on September 7, 1971. Profiles 1, 2 (see figures 5.2 and 5.3), and 3 were sketched and described (Table 5.1). Profile 4 was only described but not drawn. The description (Johnson 1972-1975:15) says "on line 17E & F; Ash (stratum 2) appears to thin out; upper level resembles stratum 1 (profile 1), overlies a dark brown deposit (similar to stratum 3), which in turn overlies a lighter deposit (similar to stratum 4). To the west, '3' appears to thin, while '4' slopes upward."

Table 5.1. Profiles 1, 2, and 3.

	Profile 1	Profile 2	Profile 3
Grid #s	D21, C21, B21 (East-West)	D15, D16, D17 (North-South)	Diagonally from B13 to E10 (Northwest to Southeast)
Surface depth	16 in	16 in	15 in
Bottom Depth	38 in	38 in	39 in
Surface Remarks	Rockfall from roof		
Layer 1 Remarks	Thin layer of straw and grass, yellow dust. May have been disturbed.	Rockfall over thin unburned straw w/ animal droppings over charcoal in gray dust, over red dust. May have been disturbed.	Rockfall, unburned animal droppings, little straw, no charcoal on surface – stratum dark reddish-brown. One major charcoal lens.
Layer 2 Remarks	Grey ash. May have been disturbed.	Gray ash, some very distinct charcoal lenses at upper boundary	(Layer 1A). Loose tan dust, much larger straw in bunches, some charcoal. Cordage, etc.
Layer 3 Remarks	Dark Brown dirt with lenses of charcoal; burned animal droppings	Dark brown dirt w/ lenses of charcoal and of orange ashy dust, animal droppings, cordage.	
Layer 4 Remarks	Reddish brown dust, increasing rock, animal pellets	Light reddish brown dust, increasing rock, no animal droppings.	

Notes: Surface and bottom depths listed here are approximate extremes as I read from the sketches and were taken from the datum at 6E. Layers are natural strata, not arbitrary, so there is great variance in the layer depths.

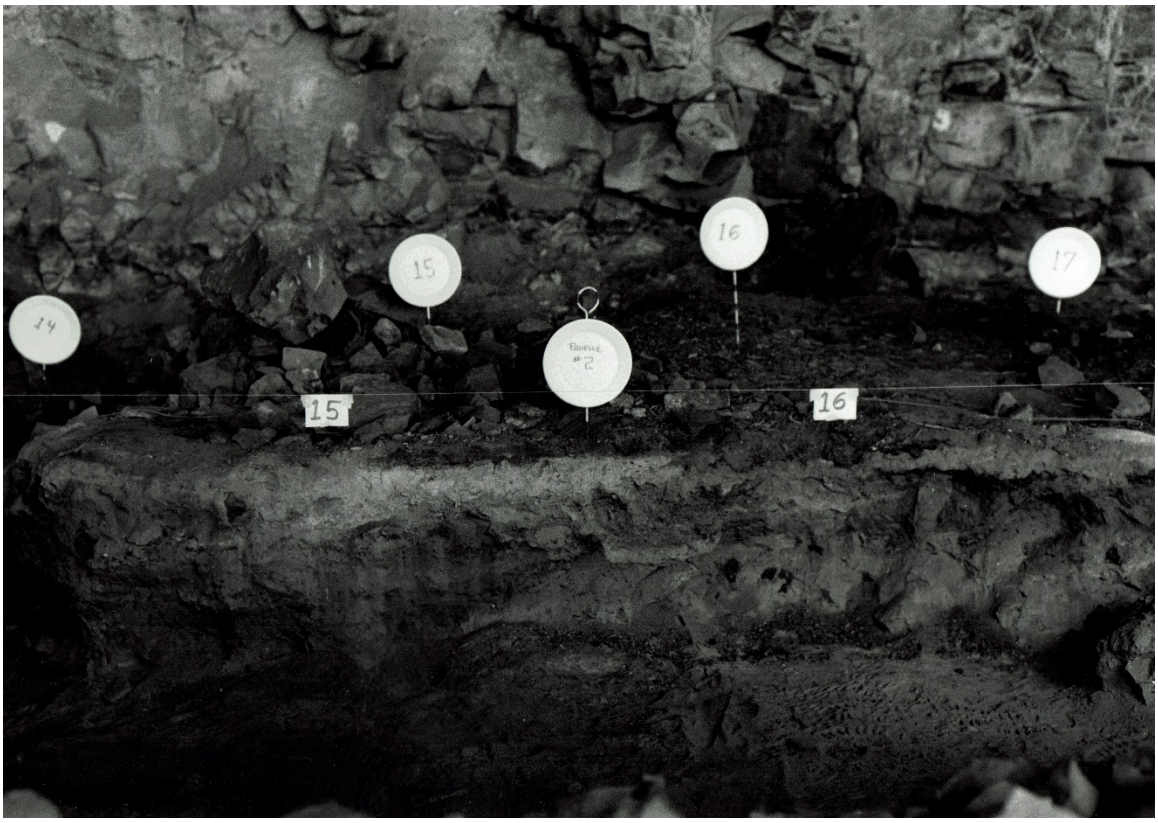


Figure 5.2. Photograph of Profile 2 (TC1 Large Print 3). Photo taken in 1971. Plates and tags from left to right read 14, 15, 15, Profile #2, 16, 16, 17.

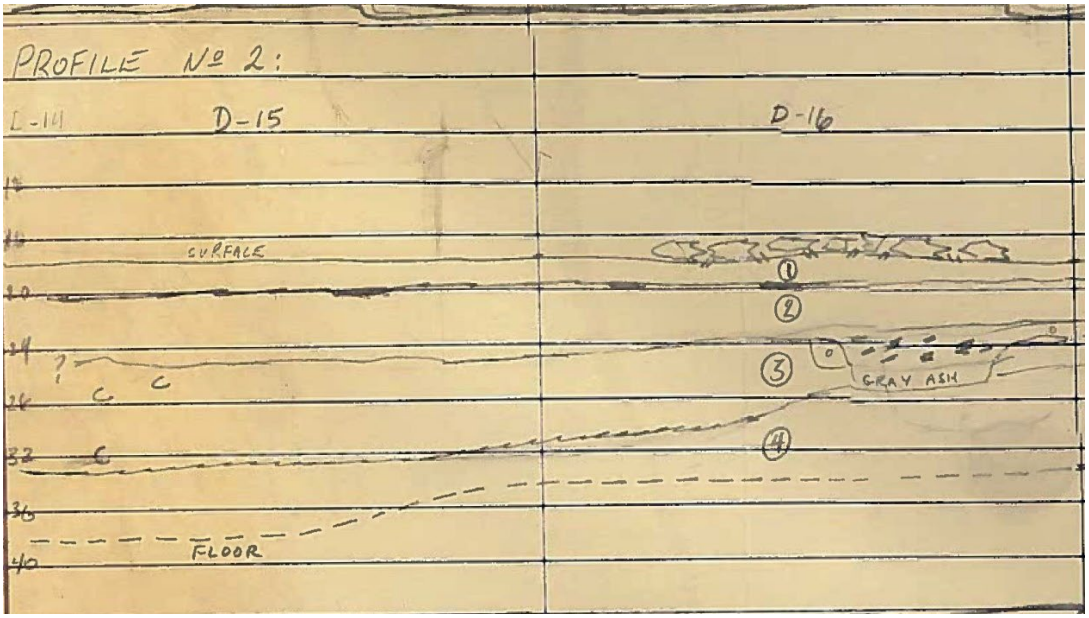


Figure 5.3. Original drawing of Profile 2. Detail from large oversize drawing mounted on cardboard.

Figure 5.4. Photograph labeled “excavation done July-1972.” (B Frame 15.) Taken from I10, facing back wall of cave (East).

Most of the artifacts collected up until 1972 were chosen selectively, mainly formed artifacts and larger, interesting pieces of unworked bone and plant. In his handwritten notes, Tom (Johnson and Johnson 1972-1975 [unpaginated]) commented that things that were kept were “all artifacts including points, beads, antlers, ornaments, cordage, bone tools, stone tools, and anything else which may seem unusual, small amount of bone frag. And shell frag. And etc.” Things that were discarded were “most bone, most shell, most bedding or used for storing material or etc.- dried grass, most lithic debris except for worked type material” (Johnson and Johnson 1972-1975 [unpaginated]) They were placed in plastic produce bags (see Figure 5.5) along with manila tags with written provenience information.

Figure 5.5. Photograph of 1972 excavations labeled “Central Station of TC1 8-1972.” (Photograph C Frame 4).

Tom attempted to follow the advice of Dr. Smith to not disturb deeper layers, in order to protect much of the site. However, he mentioned there was one deeply excavated portion. In August and September 1972 Tom dug Test Pit A, an approximately 6 x 6 foot area which consisted of grids 6E, 6H, 7E, and 7H. This appears to have been around when the method of collecting changed as well. In his handwritten notes, Tom Johnson (Johnson and Johnson 1972-1975 [unpaginated]) writes “starting Spring 72 much more to be kept for I will also be digging and able to watch for more than artifacts (bone, shell, etc.).” Instead of sifting the materials (which resulted in a large backdirt pile [see Figure 5.6]) and selectively keeping artifacts; all disturbed material was taken from the cave in bulk bags (see Figure 5.7). These bags were larger trash-sized bags and were not sorted before being taken from the site. There was a total of 32 bags from the Test Pit gathered in this manner.

Figure 5.6. Photograph of 1972 backdirt pile labeled “Back Pile September 14-16 1972.” (Photograph D Frame 2). Taken from left wall (north), facing right wall (south).

Figure 5.7. Photograph showing extent of Test Pit A, labeled “September 1972.” Also note the large artifact collection bags noted for 1972 excavations. (Photograph D Frame 4). Taken from just direction of Test Pit A, facing towards mouth of cave.

After 1972, the consistency of record-keeping diminished. While the typed portion of "Excavation at Tekison Rockshelter" (Johnson 1972-1975) was officially dated at 1972, there are limited handwritten notes in the back citing that more collecting was done by the parents in 1975. Additionally, there are many bags of bulk materials held at CWU which are speculated to be from Tekison Cave, but have a different provenience system (see Chapter IX "Discussion and Conclusions").

2019 Site Revisit

The site revisit occurred on June 12, 2019. The visit was organized and led by Pete Lopushinsky, WDFW Manager of the Colockum Wildlife Area, and also included CWU Anthropology professors Pat Lubinski, Steve Hackenberger, and Hope Amason, avocational archaeologist Tom Johnson, and myself. There were several goals and purposes of the trip. The first was to get a narrative of the excavation from Johnson and facilitate his memories to get more information. The second was to build rapport between stakeholders. We first sought approval from descendant communities about our intention to visit the site with the avocational archaeologist. Descendent Communities did not object to the visit, but the Yakama Nation did request that we help assess the site condition and determine if there had been any changes since the last site revisit by WDFW (June 30, 2014). So, our third goal was to attempt some photos duplicating those from the last site revisit and document surface artifacts and features.

Johnson shared how he originally got to the site. At the time there was a road nearby; he said, "there was a lot of logging going on, it was like a freeway." He had a pickup truck and a jeep trailer with four railroad ties he used to straighten the road when

it became impassible, laying down the ties so that he could drive over them. That access road has now been closed, so for the revisit we accessed the site with ATVs.

To get to the site, Pete Lopushinsky met the rest of us at the Crescent Bar Boat Launch and we took a boat loaded with ATVs across the Columbia River to the west bank. There we unloaded the ATVs to start the miles-long trip. The air smelled of sagebrush as we rode into the basalt ridges (although riders on the second ATV recall it being dusty). Along the way you could see leftover irrigation systems from when there were orchards in the area. The closer we got to the cave, the bumpier the terrain became. When we stopped partway there for a break, I noticed the vegetation had changed from predominately sagebrush to include some riparian plants near seasonal waterways. Many flowers were in full bloom. I did not recognize it at the time, but many of these flowering plants were wild food sources, like *Lomatium.* I remember that Tom, who has traveled the world, looked around in awe and commented, "This is God's country."

Continuing, after not too long, we stopped at the drainage below the cave. Tom shared that this area was where his family camped during the excavations. There were several elk in the draw leading up to the cave, who quickly ran into the distance. Tom thought it was good luck to see them. Then we hiked up to the cave.

While looking over the site itself, I documented the following cultural materials scattered among the loose rocks that make up the floor of the cave: 9 chipped stone debitage, a hammerstone, at least 10 animal bones, including a long bone with green fracture, a sheep-size hyoid, a sheep-size carpal bone (cuneiform 2/3), a sheep mandible, a sheep maxilla with teeth, and a marmot cranium. Besides the materials apparently in place on the floor of the cave within the drip line, there were additional materials at the

base of the spoil pile at the cave mouth, and exposed to the elements. These included more chipped stone debitage, bone fragments, and freshwater shell pieces.

Also observed were the following artifacts that are likely left over from the 1970s excavations: barbed wire fencing, remnants of level wire, a hand-made folding measuring stick (fashioned with some stadia rod face plates), metal grid markers, a makeshift plumb bob, cardstock paper tags, and a shovel head. Of particular interest are the 4 manila cardstock paper tags we observed on the cave floor, which are in pristine condition. These tags match those that accompany the CWU-held collection, and the tags that Tom remembered using in the 1970s excavations. They are very likely to have been on the cave floor since the 70s, and give a good indication of the preservation of organic materials in the dry cave.

We also observed some historic artifacts that post-date the 1970s excavations, namely two all-aluminum Pepsi cans dating ca. 1994, one from inside the cave and the other from the gully below the cave. It is unknown if any other collectors had been to the cave since the excavation, but the family appears to have stopped going after the 70s. When I asked Tom how long it had been since he had visited the cave, he said (with a tone of somewhat disbelief) that it had been nearly 50 years. Based on our observations, the site seems to have been little disturbed since the 1970s excavations, given the general lack of more recent historic garbage, presence of 1970s excavation grid markers and other materials, and lack of freshly exposed dirt. Figure 5.8 shows original field photos from the 1970s excavation as well as recent photos of the cave and remnant 1970s materials.

Figure 5.8. Comparison photos 2019 vs. 1970s. Top row LEFT: Metal grid stake from June 12, 2019 (scale with 10 cm bars), and RIGHT: 1970s excavation in progress with manila cardstock tag hanging from similar grid stake (B Frame 12). Middle row LEFT: Manilla cardstock tag from early 1970s with rodent gnawing on top edge (observed June 12, 2019, scale with 1 cm squares), and RIGHT: One of the Jonhsons excavating from 1970s (Cropped image from B Frame 7). Bottom row LEFT: Cave view from June 12, 2019, and RIGHT: Similar view from 1970s (Cropped image from D Frame 3). There does not appear to be any significant change from the 1970s to 2019 photo.

Tom shared several remarks about the cave. Compared to the disturbed, uneven surface we saw in June, 2019, he said it was relatively flat before excavating. Also significant about the site revisit was that he opened up about family members and

wanting to help us connect with them. He commented that one brother in particular, "Sam," had a fantastic memory and we should speak with him. This positive experience completing the site revisit helped us work together the rest of the summer. Through the partnership we received valuable site information and a loan of artifacts from the cave.

Avocational-held Collection

As previously stated, the CWU-held collection had 18 of the 219 artifacts formally cataloged in the 1970s. The avocational archaeologists cataloged using lot cataloging. With this method, a single artifact catalog number may have a count greater than one, if it is the same object type and provenience. For example, cat #114, cordage, from 17G 13" deep, has three separate pieces of cordage. When referring to counts of artifacts in this section, I am referring to the number of catalog numbers, the actual count of individual artifacts may be higher. Some 201 artifact lot numbers from the 1970s were unaccounted for.

The avocational archaeologist (Tom Johnson) loaned additional artifacts from the Tekison collection to CWU in 2019. Most of the material was identified as coming from Tekison Cave due to labeling and comparisons to the 1970s artifact catalog. However, there were additional materials from both other known and unknown sites, such as "Quilomene." Here, only the known Tekison materials will be discussed. Fifty-one of those cataloged artifact lots were accepted as a long-term loan from the avocational archaeologist. Two catalog numbers, which in part were already in the CWU-held collection, were also in the loan. One set of cordage that had provenience but was not

assigned a catalog number was received. This leaves 150 artifact lots documented in the 1970s artifact catalog still unaccounted for.

The whereabouts of unaccounted artifacts may be in possession of others who participated in the excavation. From speaking with the family, it was relayed that whoever found the artifacts during collecting stints would get to keep it. Even in 1970s report, one artifact is noted as being found by one individual, but given to another. One basket (cat #44) and two horns from the site were donated to the Wanapum Heritage Center by Sam in Fall of 2019 (Angela Neller, personal communication 2020). Other than those objects, the location of artifacts that are not CWU-held or on loan from the avocational archaeologist is uncertain.

During the meetings at CWU, Tom implied that he wanted to give CWU the objects from Tekison Cave, saying "I think this is where they should be." As it was a family excavation, he also included the family's feelings, "most of the family, I think, agree with what I'm doing, so, I'm sorta the spokesperson." However, while Tom said he had no future intentions of retrieving the objects, because of the strong connections he had to the collection, he wanted to leave the option open. Because of this, he agreed to leave the collection with CWU as a long-term loan, which also had what is known as a "promised gift" (Carnell and Buck 2010) component. That is, the avocational archaeologist agreed that the collection would transfer to CWU-possession if it was still here and he had passed away.

When I asked the Tom if there is anything he would like to see happen with the collection, in regard to research or use, he replied, "just, I want you to take care of it. I don't have any [requests], I'm turning it over to you and that's really neat."

Reflections

I believe the goals of collaborating with the avocational archaeologist were met. We were able to partner together so the site excavation could be better understood, and artifacts could be documented and analyzed. As discussed earlier in the chapter, there are many different forms of artifact recovery by non-professional archaeologists. In this case, Tom was motivated to excavate by the same reasons as many professionals are. Tom stated that through his influence, he was able to document many things about Tekison that would have otherwise been lost. Hart and Chilton (2014) posit that collecting artifacts could be understood as a social practice within a certain sociopolitical context that provides someone with ontological security, defined as "a measure of confidence in who they are drawn from and the continuity and connection to place and heritage" (Hart and Chilton 2014:3). Tom gave me a written response to my question of what memories or feelings he had about the site. His response was "connection to nature, respect of the rattlesnake and elk. Pride of what we were able to accomplish. Family Time!" Rather than just talk about the archaeology of the site, Tom revealed the sense of place the site represented with memories of nature and family. Like a professional archaeologist's profession is part of their identity, a collector's practice is often also part of their identity and may intertwine with other aspects of their life. For Tom, the excavation, connection with the land, and family bond are inextricably linked.

Relationships between professional and avocational archaeologists have been highly debated in recent years and led to the 2018 "Society for American Archaeology Statement on Collaboration with Responsible Stewards of the Past" (Pitblado et al. 2018).

Pitblado et al. (2018) document the process of developing that statement, which seems to reveal that most archaeologists accept the practice of collaborating with non-professionals if they are doing so in an ethical manner; the ethical standards themselves are what appear to be more contentious. While the past actions of collectors are not outright condoned, in many cases the benefit of potential positive outcomes, like donation of collections or recovery of information, outweighs the cost of the working with those who worked under undesirable circumstances (SAA 2018). A no tolerance approach to working with collectors could result in serious loss of potential archaeological knowledge and artifacts (SAA 2018).

Hart and Chilton (2014) point out that practices by both collectors and professionals generate "things and information while also destroying things and information" (Hart and Chilton 2014:3). With this equation, one could also critique avocational archaeology in the same way professional archaeology is critiqued. Laws and practices affecting both avocational archaeology and professional archaeology have changed throughout the decades. Archaeology has predominately been done under Western values and frameworks (Atalay 2006). The dichotomy of amateur versus professional is also a rather Western idea. In my opinion, working with collectors or amateur archaeologists can never be blanketed as right or wrong. Instead of just focusing on the ethics of collaborating with non-professionals, one should really be questioning the ethics of their archaeological research more broadly, including the unique context of the research purpose, intentions of avocational archaeologists, relationships with the conducting institution and descendant communities, and other contributing factors.

CHAPTER VI

COLLECTION REHABILITATION

This chapter first discusses the history of the CWU-held Tekison cave collection and the state it was in when I began this research. Then I describe the process and results of rehabilitating the CWU-held and avocational-held collections.

History of the CWU-held Collection

The Tekison Cave collection is one of three separate sets of archaeological collections managed by CWU, and affiliated with the Department of Anthropology and Museum Studies. There is a CWU museum (the Museum of Culture and Environment [MCE]) that manages some collections of archaeological materials. However, while the MCE is a descendant of the department's former Museum of Man, since 2009 the MCE has been technically independent of the department. Additionally, there are archaeological collections housed on campus that are managed by the Central Washington Anthropological Survey (CWAS, formerly the Central Washington Archaeological Survey); those collections are also officially separate from both the department and MCE collections. The department archaeology collections currently consisting of about 460 boxes of material, are managed by the department's archaeology faculty. Remaining separate from the MCE allows for more freedom of use and management by faculty, however there is not an official, comprehensive department collections management policy. This has led to distinctly differing treatment of individual collections managed by faculty. To contribute to the department's efforts in using and

rehabilitating collections, part of the goal of this rehabilitation was to document the process and create policy recommendations that may be applied to other collections in the future.

It is unknown exactly when the Tekison Collection came to CWU. The avocational archaeologist (pseudonym Tom Johnson) was a student of Dr. William Smith around the early 1970s and even did some work at the Museum of Man, the predecessor to the separate department collections and the current Museum of Culture and Environment. This relationship presumably facilitated the donation of artifacts to CWU. While the exact history of the CWU-held collection of Tekison materials prior to my thesis work is not entirely certain, there is some information about boxes thought to be associated with the site from a 1982 note (reported by Scott and Euster [2011]), a 1994 box inventory (Sharpe 1994), a 2000 box inventory (Johnson 2000 a,b), a Rosa Rockshelter curation project report (Scott and Euster 2011), and a summary of Teksion artifact sorting from 2012 (Alberg 2012). These are described below.

Confusion about which department-held materials were from Tekison Cave and which were from other sites, notably Rosa or Roza Rockshelter, date to 1982 or earlier, based on this "Under the 'Fume Hood' Collection" note, reading:

> This group of boxes contains cultural material within an organic/soil matrix as collected within a sampling design of some variety. These materials we believe are connected in some way with a rock shelter, possibly the 'Roza Rockshelter' and may have been excavated by a [Johnson]. Please will you, the rediscoverer of these items, consult with the powers who are (ie. W.C. Smith and or others) and

> identify and properly accession and label all of the boxes. . . . .This collection of 12 green archive boxes was removed from the cupboard below the fume hood in Rm. 232 INSB. on Dec. 6, ’82 and placed in storage in the archive room, Rm 1 INSB, CWU, EBURG, by me, Steve Lipsky [Scott and Euster 2011:42].

This note is confusing because Rosa Rockshelter (45YA301) was not excavated by an avocational archaeologist, but by Dr. William Smith, as described in his excavation report (Smith 1971). This already created conflicting facts about the provenience of the 12 boxes.

On November 7, 1994, a partial inventory of CWU archaeology collection boxes, then held in the old Ellensburg hospital, was completed by CWU student Jim Sharpe (Sharpe 1994). This inventory makes no mention of the 12 presumed Rosa boxes noted earlier by Lipsky, but lists three boxes for “45-KT-215 Big Cave & Tekison Cave [Johnsons] 1972” (Sharpe 1994). In November, 2000, a collections assessment report and comprehensive inventory of the old hospital material was prepared by Paula Johnson of Paragon Research Associates (Johnson 2000a, b). In these documents, three boxes are listed for 45KT215, and 12 additional boxes for “Roza Rokshelter (?)” (Johnson 2000a). Paula assigned each box an inventory number which was written in Sharpie on each box. The Excel file we have (Johnson 2000b) appears to have been corrupted since the inventory numbers do not match current records. Scott and Euster (2011:3) suggest that possibly the Rosa Rockshelter materials were re-boxed at this time, but Dr. Lubinski (personal communication, 2020) thinks this unlikely.

The Paragon Research Associates (Johnson 2000a) box inventory was updated and computerized in February 2006 by undergraduate museum studies student Heather Hull, who listed what was then stored in the then-abandoned Dean Hall after the archaeology collection was moved there from the old hospital. Her original database could not be accessed for this thesis. By 2008, the collection was moved again to the then-abandoned Samuelson Union Building (SUB) to allow for remodeling of Dean Hall (into which the Anthropology and Museum Studies department moved in January 2010). Hull's Access database has been continuously modified and updated under the direction of Dr. Lubinski since 2006.

In 2010, work was completed by CWU students with professor Dr. Steven Hackenberger to investigate the Rosa Rockshelter collection, which had been moved to the second floor of Farrell Hall for this study, along with boxes thought to be related. Much of the material was sorted by material type. While the focus of this work was to identify and curate artifacts from Rosa Rockshelter for a CWAS contract, it was discovered that there were mostly materials from other sites within the 12 boxes (Scott and Euster 2011). These boxes, plus seven more totaling 19, were then inventoried with details such as box type, material, and provenience systems used (Scott and Euster 2011). It was found that three provenience systems were used; the first with metric measurements and numbered East and West units (example: 13W 230-250 cm), the second with standard measurements and alphabetical units (example 15H 32"); and the third used a sack and bucket number (#10 sack 62 buckets) (Scott and Euster 2011). It was determined that artifacts under the first provenience were Rosa Rockshelter, and the

other two systems (at this point in 15 of the 19 boxes) warranted more research (Scott and Euster 2011).

Soon, more work was done to sort the remaining materials that were not from Rosa Rockshelter. The following information is from a student paper submitted to Dr. Lubinski by Winifred Alberg in September, 2012. Winnie was at the time considering a Master's thesis project on Tekison faunal remains, and this paper summarized some sorting she had done with two student assistants in Spring and Summer 2012. This was a preliminary sort of 6 of the boxes of materials (inventory numbers 301, 302, 303, 305, 308, and 309) thought to be associated with the Tekison Rockshelter. The artifact bags in those boxes already had an existing CWAS bag number at this point. Many of these bags were mistakenly labeled Rosa Rockshelter. Presumably, all were yet-to-be sorted bulk bags of multiple material types. Alberg's team sorted out materials into smaller bags, transferring the original information onto them, along with the newly identified materials. There were at least 68 different material identifications. Some of these would later be useful for Dr. Lubinski's cataloging classification, which I used. However, others were superfluous such as there being both an "interesting" and "misc. interesting" identification. Additionally, there were material misidentifications, as sorting had not been double-checked.

Subsequent to the work by Alberg's team, there was apparently some more sorting work done under the auspices of CWAS through 2014. This was being completed in Farrell Hall CWAS office/lab space. There is no documentation of the nature or extent of this work. However, some of this work including boxing or reboxing by Lauren

Walton, based on some notes on boxes. To my knowledge, nothing more was done with this portion of collection between 2014 and when I began this research in Fall 2018.

Rehabilitation of the CWU-held Collection

As a result of previous collections management, there were three stages of sorting and curation: unsorted in original bags, sorted into new bags, and unsorted in new bags. I first saw the collection in Fall, 2018. Shane Scott, former CWAS director, gave me an overview of the portion of the collection stored in the Farrell Hall Room 240 CWAS workroom. These materials were initially part of the possibly Rosa Rockshelter sorting described in the above section and were both sorted into new bags and unsorted in new bags. There were 14 boxes, 2 trays with bags, 2 bulk garbage bags, one tray with exposed artifacts, and oversize maps and documents, stored on the counters in Room 240.

Additionally, when I began, three boxes that were never part of the Rosa Rockshelter sorting (inventory #s 106, 108, 110, all noted as "Tekison and Big Cave" since the 1994 box inventory), were in the Anthropology Department artifact storage room in Farrell Hall Room 124, rather than in the CWAS spaces. These three boxes apparently were not sorted until I began my research in 2018-2019 and were presumably in the same state as when they had been donated. Dr. Lubinski and I retrieved these boxes for my project, and I brought them to Farrell 240 for the rehabilitation work.

Archival supplies for my rehabilitation were purchased with funds provided by the Department of Anthropology and Museum Studies and a Graduate Student Research Support Award (see Table 6.1) received in May 2019. The department contributed $231.35 to purchase bags, gloves, paper, and masks. The supply portion support award

amount of $343.45 was used to purchase Ethafoam, boxes, trays, and file folders (additional funds were allocated for travel to complete interviews). Leftover supplies are property of the department and can be used for other rehabilitation projects. Miscellaneous reusable sorting and cataloging tools such as trays, tweezers, and hand lenses were also provided by the department.

Table 6.1: Rehabilitation Supply Budget

Supplies	Amount	Actual Cost	Funds from Department	Funds from Grant	Supplier	Product #
Bags, 3x5” 4 Mil	1000	35.00	35.00		Uline	S-1707
Bags, 3x5” 4 Mil	1000	41.00	41.00		Uline	S-1302
Bags, 3x5” 4 Mil	1000	97.00	97.00		Uline	S-1304
Gloves	200	26.00	26.00		Uline	S-12549
N95 Masks	15	19.75	19.75		Protect Life	43338-5777
Archival Ethafoam Roll	175ft	58.05		58.05	Gaylord	58110
Archival Nesting Boxes	4	48.40		48.40	Gaylord	NSB4
Archival File Folders	25	11.50		11.50	Gaylord	F9113-25
Archival Acid Free Boxes	12	143.00		143.00	Gaylord	RC112510
Archival Box Trays	30	82.50		82.00	Gaylord	RSCTB
Archival Paper	1 ream	12.60	12.60	0.00	Gaylord	PB811
Supplies Total		574.80	231.35	343.45		

The three boxes in the artifact storage room were in original field bags. I will first describe how these artifacts unsorted in original field bags were rehabilitated and then describe how the materials from the CWAS workroom were rehabilitated.

Rehabilitation of Department-held Boxes

The original "field" bags in boxes 106, 108, and 110 from the department storage room consisted of three different types of produce bags. The bag types were:1) "Complimentary Bag for your Fresh Produce" written in green with yellow background and tied together at top, 2) "Albertson's Freshest Produce Under the Sun" written in green and tied together at top, and 3) ~6 x 8 inch clear plastic baggie with a twist tie closure. These thin bags were beginning to fail, and some artifacts had poked holes and fallen out of the bags (see Figure 6.1). In general, each bag had an original manila tag labeled with the unit and depth. Some artifacts were also labeled with a 1970s catalog number.

Figure 6.1 Contents of a box with original field bags. A loose rib can be seen in the center bottom. An undated piece of paper reading "Big Cave & Tekison Cave" was in the box.

Because I was taking ANTH 425 “Zooarchaeology” in Winter 2019 and wanted to use the Tekison Cave collection, I cataloged these three boxes right away, after informing tribes of intended thesis and zooarchaeological research. According to labels on the boxes, the contents should have just been fauna. When I started however, I found materials that were not bone (see Figure 6.2 as an example). Since a cataloging plan had not been made and I wanted to use these materials before cataloging the entire collection, I did not make an effort to sort all boxes by material type before assigning catalog numbers. Each bag was opened and all contents in that bag were cataloged sequentially in the cataloging notebook by material type (see Table 4.2), beginning with #1001. The exception to sequential catalog numbers was in the case of artifacts that had already been cataloged in the 1970s (see Appendix E). Dr. Lubinski suggested retaining original numbers when possible, instead of assigning a new one. From the appendix of “Excavation of Tekison Rockshelter,” the possible 1970s catalog numbers ranged from 1-219 (Johnson 1972-1975). It was thought that starting the 2018 catalog with number 1001 would avoid any potential for overlap with the original catalog numbers.

Figure 6.2. Original field bag and tag before cataloging. Pictured are cat #1001 (bone) and 1002 (plant). Manila tag is labeled “Date 9-24-71 Big Cave 13G 14” deep teeth”

Catalog slips were printed on Permalife brand archival paper (see Appendix B "Catalog Slip" and Appendix C "Catalog Form"). Any available catalog information was written on catalog slips in pencil and retained with each bag. For bags that had an original field tag with them, I wrote in pencil the CWU cat #on the back to retain association for later records (later changed to writing CWAS bag numbers, see below). Artifacts were re-bagged into polyethylene zip-top bags with catalog tags stored in the bag. They were temporarily stored in their previous boxes while I awaited funding for supplies.

Additionally, I created a cataloging notebook with details of the three produce bag types and which artifacts were associated with them, in case there were any clues to help with unprovenienced artifacts. I also kept an example of each bag to save with associated records to help with future identification of unprovenienced artifacts. All three types were used at least in 1971. The new catalog numbers, along with material type and provenience information, were later entered into a Microsoft Access database (see below under rehabilitation section).

Rehabilitation of CWAS-held Boxes

In Spring 2019 rehabilitation of the possibly Rosa Rockshelter material began. This was the material that had been in the Farrell Hall 240 CWAS office/lab for several years. Graduate students Josh Allen and Kathleen Hawes and undergraduate students Kate Ramos, Irais Zepeda, and Morgynn Cooke assisted with sorting and cataloging. Material was bagged and cataloged in a similar manner to the materials in original boxes in the prior section (archival paper slips, new polyethylene bags, etc.). However, this material was first sorted following the cataloging plan in an effort to keep catalog number

ranges grouped together as much as possible: first by material type, and second by provenience within material type.

The goal was to complete rehabilitation for sorted material with provenience and unsorted material with provenience. Some material that was previously boxed with a label reading "Tekison poor or no provenience" as having no or poor provenience (see Figure 6.3) was not cataloged in the 2019 rehabilitation if there was doubt about site origin. One source of confusion in particular was materials with manila tags that did not have the typical Tekison provenience information (like 6H 22 inches), but instead read "2 Springs" and had associated "bucket" and "sack" numbers. While speaking with Tom and Sam in 2019, it was suggested that even though the tags said 2 Springs, the material was probably Tekison. However, they did admit that 2 Springs was another site their parents collected at. While a case may be presented to catalog the 2 Springs materials as Tekison in the future, at this point in time I felt like there needed to be more investigation, so it was left out.

The previously sorted material was double checked and resorted into the material class list as needed. The previously sorted materials had varying amount information written in black or blue marker on the bag; the information may or may not have included material, weight, provenience, sorter initials, and/or CWAS bag numbers (see Figure 6.3). During previous sorting, these numbers acted like a field specimen number (which ties together objects from the same provenience) and we continued using the bag numbers during the 2019 rehabilitation. In our rehabilitation, we used the same CWAS bag number for every object and sub-bag found within a larger bag with the same

provenience. For example, separate bone, shell, and wood bags pulled from unsorted CWAS bag # 300 would all have had the same bag number of 300.

Some previous sorting did not conform to the desired categories (Table 4.2) for the rehabilitation. Because of this, during resorting we may have combined like materials if they were from the same bag number and had the same provenience. For example, if a bag was labeled “misc. flora CWAS bag # 300, 7H 10-12inches” and another said “interesting flora CWAS bag # 300, 7H 10-12inches” and they both contained unworked wood, those were combined and cataloged as unmodified vegetal material.

Figure 6.3 Flora CWAS bag 385 observed in 2019 rehabilitation. This is an example of sorting presumably completed in 2012 which was in a box labeled Tekison. The bag has “Rosa Rockshelter” crossed out, but still has the Rosa Rockshelter Smithsonian number on it. Note also the weight and sack and bucket information. As discussed above, it is uncertain which site this is from; the bucket/sack system does not match the known Tekison records. While this particular bag was left out of the Tekison collection catalogued in 2019, it is representative of the sorting done by CWAS. Materials in this bag were identified as “flora;” however, contents included bone, shell, and lithic debitage in addition to the vegetal material. Photo by Kate Ramos.

Bulk, unsorted material was then sorted. Because of the amount of fine sediment and plant material, unsorted samples were screened and material smaller than 1/8 in was cataloged as unsorted material, after checking to make sure there were no complete objects such as rodent bones. Unworked plant, lithic, and droppings with excessive counts (>50) were weighed instead of counting. This way, the database would have a representation of the amount of material without spending an exorbitant amount of time counting.

During the sorting stage, all known information was written on the catalog tag, except a catalog number was not yet assigned. It was also noted whether information was from the original field tag or written in sharpie during previous sorting. Partway through the process, Dr. Lubinski suggested that instead of writing catalog numbers on the back of original tags to retain associated data, we write the CWAS bag number instead (example: CWAS bag# 120). Because not all materials had a CWAS bag number (including any materials from the boxes department-held boxes), we went back and assigned CWAS bag numbers beginning at 1000, to objects that did not have one. To keep the records consistent, I went back to revise the department-held materials that were cataloged. I assigned them a CWAS bag number, erased catalog numbers from the backs of the field tags and changed them to CWAS bag numbers, and thereafter only wrote CWAS bag numbers. While the term “CWAS” bag number was retained for consistency, it is no longer associated with CWAS. It is simply a number to tie together artifacts from the same provenience, whether artifacts were handled by CWAS or not. Assigning catalog numbers was done in the order of the material list (see Table 4.2). After materials

were assigned catalog numbers, the information was written on the catalog form (Appendix B) and subsequently added to the Access database.

Storage and Records

After cataloging the collection, I began rehousing in archival boxes (see Figure 6.4). While in many institutions saving shelf space is a major concern, at this point it was not a priority and instead faculty preferred it to be in catalog number order as much as possible. Materials were kept grouped by materials for preventative conservation, however within material boxes, artifacts were always placed in catalog order, regardless of size considerations. This organization also allows for easily locating objects and limiting handling. The lowest catalog number was always placed on top, with descending numbers in lower trays. The 15 x 12 x 10 inch archival boxes had one to three levels of stacking interior trays, allowing lower artifacts to not have extra weight placed on them. Tray dividers were created by cutting archival blue board to size, as needed. Ethafoam was used as needed to protect and support artifacts.

Boxes were assigned numbers as part of the department's box inventory database and labels were created to identify which catalog number ranges and materials were in boxes. A more detailed inventory by tray and row was created as well to assist with finding artifacts.

The artifacts loaned by the avocational archaeologist were cataloged and housed in a similar manner, however as they are not currently permanently accessioned, they were stored separately with identifiers that they are not CWU-held. The newly housed

Figure 6.4. Rehabilitated faunal box.

loan artifacts are now in much better storage conditions than when they were received (see Figure 6.5). However, when I applied for funding, I had not anticipated receiving this loan of organic artifacts, so did not budget for supplies that would provide the best possible housing. Housing could later be improved further by creating custom trays, similar to the Burke Museum's housing method for cordage (Burke Museum 2018b).

Associated records were scanned so that they can be digitally accessible. A finding aid for the digital and physical locations was created (see Appendices F and G). Small (~4x6") photographic prints were stored in archival print sleeves in a binder. Larger prints were stored in archival folders. Other documents and records that fit were also stored in archival folders. Oversize records had custom containers made from archival blue board for storage. According to recommendations by Cofield and

Figure 6.5. Long-term loan original housing. Cordage and matting with failing tape labels were separated by a layer of plastic wrap. This material was rehoused in a manner similar to Figure 6.4.

Majeweski (2019), while original records should always be kept, if they were not created using archival materials they should be reproduced doing so. At this point, there are only the non-archival originals. Because they have been scanned, it should be possible to create archival copies.

CHAPTER VII

ARCHAEOLOGICAL ANALYSES

This chapter describes the results of archaeological analyses, the methods of which are detailed in Chapter IV "Methods." It does not include description of excavated materials that were not subjected to detailed analysis. For a general summary of unanalyzed materials tabulated in rehabilitation cataloguing, see Chapter IX. Three analyses were performed: zooarchaeology/faunal analysis, radiocarbon dating, and obsidian sourcing. When possible, the sample faunal analysis identified taxon and taphonomy of a sample of 170 specimens. Additional analysis was done on ageable dentition of specimens with at least a genus level determination. Radiocarbon dating was completed on two specimens. Obsidian sourcing was completed on one biface.

Sample Faunal Analysis

For this thesis I examined an asystematic sample of 170 bone specimens from Tekison Cave as part of the ANTH 425 Zooarchaeology course. This sample was selected from the department-held boxes containing original field bags with provenience information, with the idea of determining if there were any human-modified fauna in the sample. As described in Chapter IV "Methods," I selected specimen bags at random, out of convenience rather than statistical random sampling, until I was within range of my target of around 200 specimens. It is unknown how representative this sample is of the site, both because of its modest size and since it is unclear whether faunal remains were systematically collected early in the avocational excavation. Based on the rehabilitation

catalog records unambiguously from the Tekison Cave, there are 1,183 faunal specimens in the CWU-held collection (bone only, not including fur, shell, etc), so this analyzed sample composes about 14% of the total. The faunal sample is drawn from 15 distinct proveniences, as summarized in Table 7.1).

Table 7.1 Summary of Faunal Sample Provenience

Unit	Depth (inches)	Bone Count	Catalog Numbers and Notes
6G	59-60	2	184 sheep maxilla with cut marks and adhering tissue
6H	58-59	1	182 sheep horn core
7F	25-30	6	1003, includes sheep metatarsal cannonbone with adhering tissue and cut marks
7H	63	5	183
13G	14	2	1001
13G	19	30	1045, 1587, 1589 includes sheep maxilla with cut marks and elk mandible sent for radiocarbon dating
13G	19-24	3	1008
13G	19-24	2	1030
14F	19-25	35	1011, 1050
15E	Unknown	2	1044
16G	Surface-8	14	1018 includes carpals from same sheep as they articulate strongly and have adhering tissue
17H	Surface-7	15	1010, includes sheep metacarpal cannonbone with anvil mark and adhering tissue as well as impact flakes
19C	33.5	2	1006
Unknown	Unknown	51	1005
	Sum=	170	

Tabulations in Table 7.2 show the sample is dominated by large mammals (143 bone specimens are identified or unidentified mammals deer-size or larger, while only three specimens are rabbit-size or smaller animals). The sample includes unidentified bird, unidentified rabbit, elk (*Cervus elaphus*), and bighorn sheep (*Ovis canadensis*). The single bird specimen was a femur element from an unknown bird about the size of a large

sage grouse with adhering tissue and acid dissolved portions. There was also a single specimen identified as rabbit, a femur. An additional long bone flake specimen identified only as Size Class 3 (rabbit size) is also likely from a rabbit.

Table 7.2: Summary of Fauna from 45KT215 Sample Analysis

Order	Taxon	Common Name	NISP	MNI
Class Aves (birds)				
		Unidentified bird	1	1
Class Mammalia (mammals)				
Lagomorpha	Family Leporidae	Unidentified hare/cottontail	1	1
Artiodactyla	Family Cervidae	Deer family		
	Cervus elaphus	Elk	1	1
	Family Bovidae	Cattle Family		
	Ovis sp.	Unidentified sheep	28	--
	Ovis canadensis	Bighorn sheep	1	--
	Small artiodactyl	Deer/sheep/pronghorn/goat-size	25	3
Unknown	Size Class 3	Rabbit-size	1	--
	Size Class 5	Deer-size	85	--
	Size Class 5-6	Deer to bison-size	2	--
	Size Class 4-6	Dog to bison-size	24	--
	Size Class 6	Bison or elk-size	1	--
		Total	170	6

An unusual feature of this site is the excellent organic preservation. This was apparent based on the adhering skin or muscle tissue found attached to some of the bones in analysis, and also from the June 2019 field visit, where I saw manila tags lying on the cave floor, apparently unaltered for 50 years. Thirty-eight specimens had adhering tissue only, while an additional 17 had adhering tissue in addition to other modifications (including cut marks and rodent gnawing), for 32% of the total examined bones. Some specimens had trace amounts of tissue just visible to the naked eye, while some like cat #1018 (figure 7.1), a sheep metacarpal cannonbone with impact notch and anvil marks, had enough tissue to hold the adjoining accessory metacarpal bone in place.

Figure 7.1. Sheep metacarpal cannonbone with multiple modifications. These include (a) adhering tissue, (b) impact notch, and anvil marks (not visible in photo). Cat #1018, ~9cm long.

The single elk specimen (cat number 1587) is a left mandible fragment with intact second and third molar teeth (see Figure 4.1). It exhibited slight subaerial weathering (Stage 1) and green breakage below the teeth. The tooth wear pattern and crown height measurements are described in Table 7.3. Based on these data, the elk specimen is a prime age adult in Stiner's (1990) system and would have been 48.2 months old (just over 4 years) based on Steele and Weaver's (2012) regression formula using crown heights. This specimen was selected for radiocarbon dating, which is described below. A single unknown element fragment identified as Size Class 6 (elk or bison size) is likely from elk as well. A total of 26 specimens identified as Size Class 4-6 or 5-6 are likely from either elk or sheep. These 26 specimens include cranium fragments, longbone flakes, and unknown element fragments of less than 4 cm.

Table 7.3. Cat #1587 Elk Mandible Dentition Documentation

Trait	M2	M3
Payne (1987) wear pattern		
Payne (1987) wear stage	7	6G
Posterior buccal lobe height (mm)	18.17	20.23
Medial buccal lobe height (mm)	n/a	20.27
Anterior buccal lobe height (mm)	17.77	19.59
Posterior lingual lobe height (mm)	23.64	8.34
Medial lingual lobe height (mm)	n/a	19.52
Anterior lingual lobe height (mm)	24.27	24.25
Notes	Full wear	Full wear

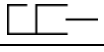
The single specimen identified as bighorn sheep is a cranium fragment, a partial frontal with horn core and attached keratin horn sheath. It is a perfect match to a comparative female bighorn sheep skeleton on loan from the Burke Museum (UWBM 39469). An additional 28 specimens were identified as sheep (*Ovis* sp.) but could not be assigned to bighorn on osteological grounds. They were a good match to UWBM 39469, but given the possible occurrence of domestic sheep, variation between individuals, and justified critique of a "close enough" approach (Lyman 2019), these were conservatively identified only to genus level. The sheep specimens included the following elements: crania, mandibles, radii, carpals, metacarpal cannonbones, metatarsal cannonbone, astragalus, and calcaneus. Six of the sheep specimens bearing teeth were intact enough for more detailed summary of the tooth eruption and wear (Table 7.4), with eruption age based on Lyman (2017), and age group based on Stiner (1990).

Although most sheep bones could not be identified to species from osteological characters, given the radiocarbon dating clearly indicating pre-contact use (below), and the bone modifications consistent with pre-contact use, these specimens are almost

certainly bighorn rather than domestic sheep. The radiocarbon bone samples were taken from depths of 19 inches and 59-63.5 inches, and yielded near identical age estimates. With the large depth range, the excavated portions of the cave may be of the same age, however there does appear to be bioturbation and/or disturbance as bone specimens from the same provenience varied widely as far as staining and presence of tissue. The radiocarbon sample from the deepest provenience of 59-63.5 inches was a Size Class 5 mammal, and due to lack of any other identified species in this size range, is likely bighorn sheep. Additionally, sheep specimens with typical pre-contact modification (e.g., impact notches, green breakage) were found in the surface-7 inch depth from the excavation (see Table 7.1) and also observed during a June 2019 site visit (see Chapter V "Avocational Excavation").

An additional 25 specimens placed into a small artiodactyl category are also very likely bighorn sheep, including the following elements: cranium, ulna, mandible, scapula, metacarpal cannonbone, metatarsal cannonbone, femur, fibula, tibia, and astragalus. Specimens with intact teeth are described below. Minimum number of individual sheep represented by this sample is two, based on left metacarpal cannonbone proximal medial facets, and also on right maxilla M1. If all small artiodactyl remains are combined, the minimum number of individuals is three, based on the right mandibular condyle. An additional 85 specimens identified only as Size Class 5 (deer or sheep size) are very likely more sheep remains, and include crania, ribs, and long bone flakes.

Table 7.4. Sheep Tooth Eruption and Wear

Cat #	Tooth	Wear Pattern	Wear Stage (Payne 1987)	Wear Stage (R+W*)	Notes
183	Right maxilla, eruption age 16-24 months, juvenile				
	DP2/3	-	-	-	
	DP4		9A	G	
	M1		8B	F	Erupted
	M2		3C	C	Erupted
	M3	-	-	-	In crypt
184	Left maxilla, eruption age >42 months, prime adult, with adhering tissue and two sets of cut marks above M1 up to 2 cm long, oriented horizontally				
	AP3	-	-	-	Full wear
	AP4	-	-	-	Full wear
	M1		9A	G	Full wear
	M2		8B	F	Full wear
	M3		7A	E	Full wear
1001	Right maxilla, eruption age >16 months, prime adult. Its size and wear are very similar to Cat #184, though it is more weathered.				
	AP2	-	-	-	Full wear
	AP3	-	-	-	Full wear
	AP4	-	-	-	Full wear
	M1		9A	G	
	M2	-	-	-	Full wear/broken
	M3		6A	D	
1004	Left mandible, eruption age between 6 and 12 months, juvenile, with adhering tissue and carnivore puncture marks				
	DP2	-	-	-	Broken
	DP3	-	-	-	Broken
	AP3	-	-	-	In crypt
	DP4	-	-	-	Broken
	M1		6A-9A	-	Partial wear, broken
	M2	-	-	-	In crypt
1008	Right mandible, eruption age >16 months, prime adult				
	M2		9A	G	Full wear
1018	Left mandible, eruption age >42 months, prime adult.				
	M3		8G	E	Full wear

*Reitz and Wing (1999) after Grant (1982)

Because of the number of artifacts found in excavations at Tekison Cave, it is tempting to immediately associate the faunal assemblage with human use at the site. However, faunal remains may be deposited in caves by animals or as the result of environmental processes (Andrews 1990:93). Therefore, identifying bone surface modification (Fisher 1995) is important to determine if humans were associated with the faunal remains.

From this analysis, it is clear that humans were utilizing fauna at Tekison Cave, but likely only the large mammals. This interpretation is based on the distribution of bone surface modification (Figure 7.1). All three of the small animal remains (one bird, one rabbit, and one rabbit-size bone) exhibited digestive damage and likely passed through the gut of a predator. Although that could be a human predator, it is more likely a non-human mammalian predator. For large mammals, the evidence is stronger for human predation. Of the large mammal sample (n=167 NISP), 12 (7.2%) of specimens had impact notches/flakes and 3 (1.8%) had anvil marks (both likely from hammerstone impact for marrow removal), while another 4 (2.4%) had butchery marks (scratches from disarticulation cuts). Only 6 (3.6%) were charred or burned, but 61 (36.5%) of specimens exhibited "green" fractures indicating breakage while fresh, probably as a result of breaking open longbones for marrow. When combined (some specimens had multiple modifications), 66 (39.5%) of the 167 large mammal specimens exhibited at least one of the above forms of modification likely indicating human use. There also was a fair amount 7(4.2%) of specimens with carnivore/raptor modification or digestion. However, the presence of butchery marks undoubtedly shows human use for at least some of the large mammal sample.

Radiocarbon Dating

The results of the radiocarbon dating are shown in Table 7.5 (also see Appendix I). The specimens, from two different proveniences, produced very similar age estimates. Results were converted from raw radiocarbon years to estimated calendar years using an online radiocarbon calibration program (see Figures 7.2 and 7.3). The calibration of cat #1588 corresponded with a 95.4% probability of being from the years 1054-1254 AD. The calibration of cat #1589 corresponded with a 95.4% probability of being from the years 1058-1250 AD . However, as shown in Figures 7.2 and 7.3, there is a higher probability that they are both on the more recent end of those ranges. To summarize the graphs, both are likely about 820 years old, or from the year 1200 AD.

Table 7.5. 45KT215 Radiocarbon Results.

Cat #	Description	Provenience	Uncalibrated Radiocarbon Age	2 σ Range Calibration[1]
1588	Long bone flake, bighorn sheep size, green break, adhering tissue, unstained/light in color. 37.1x 14.91x 9.67 mm	Test Pit A, 59-63.5 inches	856 ± 26 BP (D-AMS 036737)	1054-1254 AD (95.4%)
1589	Elk mandible. Specimen was broken off original bone into 5 pieces that refit. Combined dimensions of 5 pieces are 39.44x 26.25x 6.75 mm	13G, 19 inches	857 ± 23 BP (D-AMS 036738)	1058-1250 AD (95.4%)

[1] Radiocarbon calibration using OxCal v4.3.2 (Ramsey 2017) and IntCal13 atmospheric calibration curve (Reimer et al. 2013). This is the full extent of 2 σ calibrated age estimates (95.4% probability).

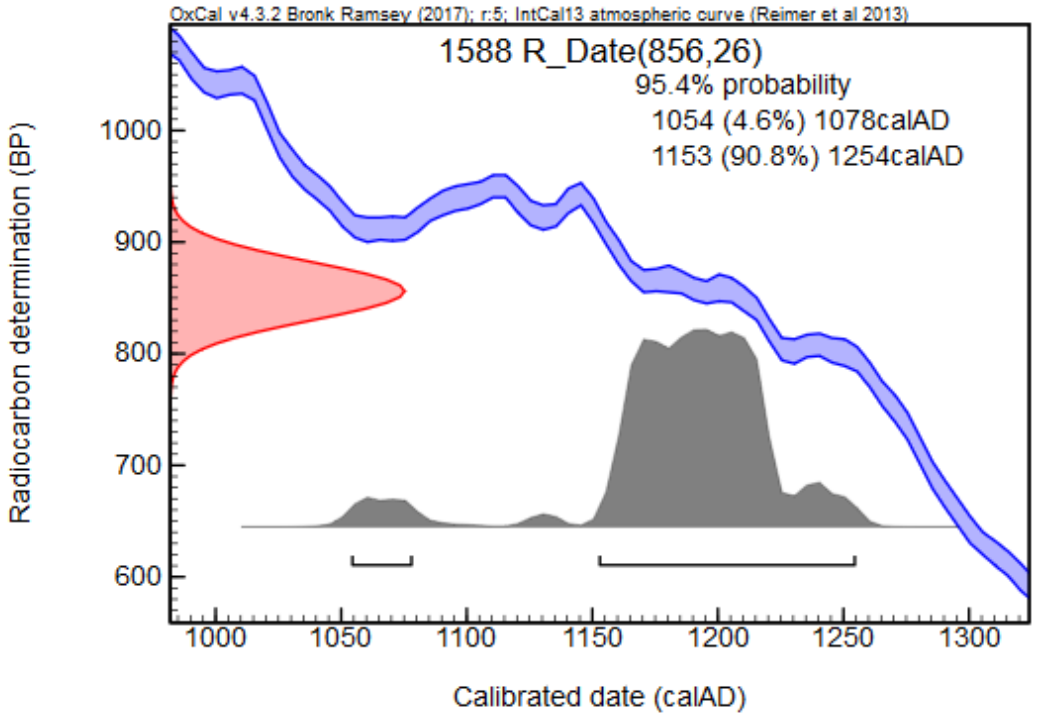


Figure 7.2. Cat #1588 radiocarbon calibration results graph.

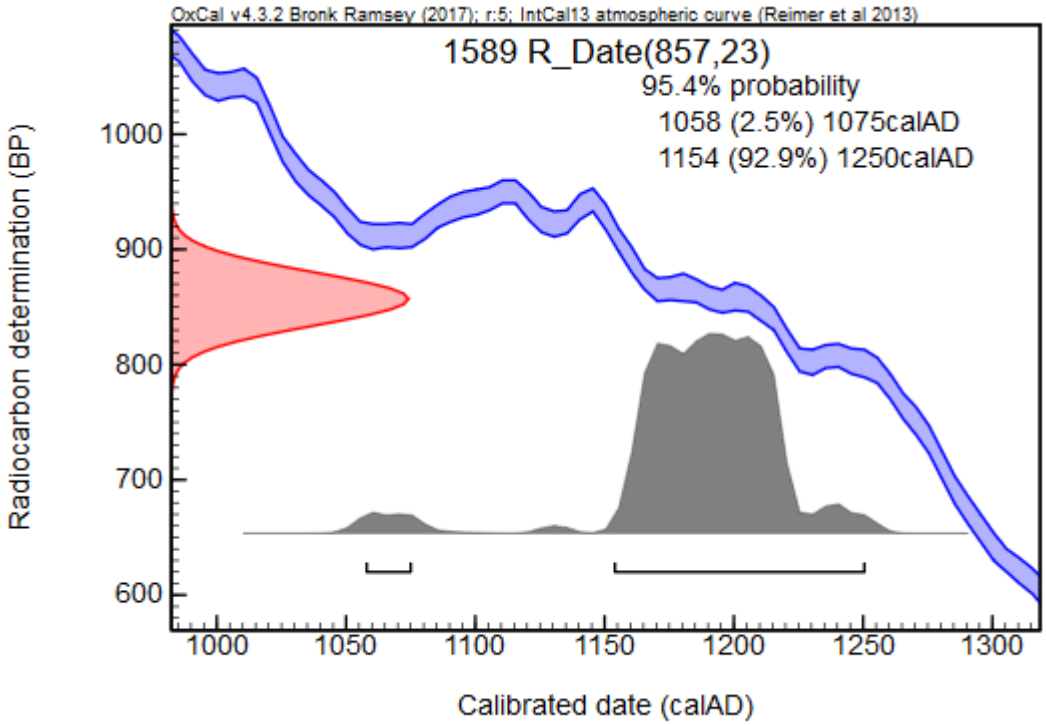


Figure 7.3 Cat #1589 radiocarbon calibration results graph.

Faunal and Radiocarbon Results Discussion

One hundred and seventy specimens were analyzed and 36% had adhering tissues. It was apparent that the preservation of the site was above-average for an archaeological site. Andrews (1990:91) notes that caves are specialized environments that have different taphonomic processes than open air sites, which can contribute to long-term preservation. However, there was still a possibility of organics being recent accumulations. Therefore, the radiocarbon estimates which predate European contact, (around 350 years ago [Carter 2017]), have greatly contributed to the ability to interpret the site.

The precontact date supports the probability that *Ovis* found at Tekison Cave is indeed *Ovis canadensis,* and not domestic sheep brought after European contact. This fact further contributes to the possibility of a Cayuse Phase usage. Lyman (2009:145) did an analysis of faunal assemblages in Eastern Washington and found that during the Cayuse Phase 18% of artiodactyl NISP was bighorn sheep. Lyman (2009:146) further notes that assemblages that consist of over 50% bighorn are in or abutting rocky terrain, which is consistent with Tekison Cave's location. From the Eastern Washington assemblages Lyman (2009:148) studied, bighorn actually began to increase in relative proportion to other artiodactyls in the last 6000 years, until the nineteenth and twentieth centuries when it declined.

Based on the faunal analysis and the radiocarbon dates, wildlife managers can use data from Tekison Cave to support stabilizing and establishment of extirpated fauna populations after Lyman (1996:114). Landowners/users are often at odds with wildlife management policies. Elk was previously near extirpation in Washington and herds were reintroduced to the Colockum Wildlife Area in 1915 (WDFW 2006). Due to

introductions, some landowners and users have doubted whether elk and other animals are native to the area (Pete Lopushinsky, personal communication 2019). This doubt was perhaps created or reinforced by an absence of elk reported in historic written Euroamerican records in central Washington, indicated in a classic elk study (Murie 1951:40-41). The avocational archaeologist even claimed his grandad imported elk from Yellowstone National Park (Personal communication 2019). However, the radiocarbon dating result is a great piece of evidence showing that elk were native to the Colockum Wildlife area before European contact, and are indeed part of the native ecosystem. It reinforces prior documentation of elk bones in archaeological sites (Dixon and Lyman 1996).

Obsidian Artifact Sourcing and Documentation Results

During rehabilitation, one obsidian artifact was observed, and given its potential for raw material source analysis, it was selected for further documentation and analysis. The artifact (Figures 4.3 [photograph] and 7.4 [sketch]) chosen for obsidian sourcing and documentation was a fragment of a bifacially-flaked tool, cat #1460. It was found in unit 19D at a depth of 43 inches. The form is very similar to a lanceolate point base, however the tool is not complete enough to make that designation. One side is presumably unfinished with some cortex, the other side exhibits three strata of flake scars. For complete object properties, attributes, and classifications recorded, see Table 7.6.

Table 7.6. Cat #1460 Lithic Documentation.

Category	Description
Object Properties	
Lithic Type	Bifacially-flaked Tool
Weight	1.65 g
Length	19.97 mm
Width	20.18 mm
Thickness	5.57 mm
Surface Attributes	
Hardness	5
Apparent Luster	Vitreous
Residues	*Present.* There is a very thin layer of tan/brown residue on the cortex and extending onto many flake scars on the dorsal side. The ventral side has a smaller amount, mainly on the flake scars near the margins. Another thin layer of residue is visible under 20x magnification when viewed at an angle on some flake scars.
Macroscopic Wear	*Present.* Chipping is visible on all intact margins on both the dorsal and ventral side. It is most apparent on the ventral side.
Use Wear Classification	
Kind of Wear	Chipping
Location of Wear	Angular edge
Shaper of Plan of Worn Area	Acute angle
Orientation of Wear	No orientation
Technological Classification	
Amount of Cortex	Secondary, on 1 side
Other	Three strata of flake scars on the non-cortex side.
Rock Physical Properties Classification	
Cortex Grain	Aphanitic
Cortex-Solid Inclusions	Absent
Cortex- Void Inclusions	Absent
Groundmass	Uniform
Groundmass-Solid Inclusions	Present, uniform distribution
Groundmass-Void Inclusions	Absent
Groundmass-Surface Texture	Smooth
Groundmass-Surface Luster	Vitreous
Groundmass-Light Transmittance	Transparent under transmitting light. Translucent without transmitting light.
Groundmass-Patina	Absent

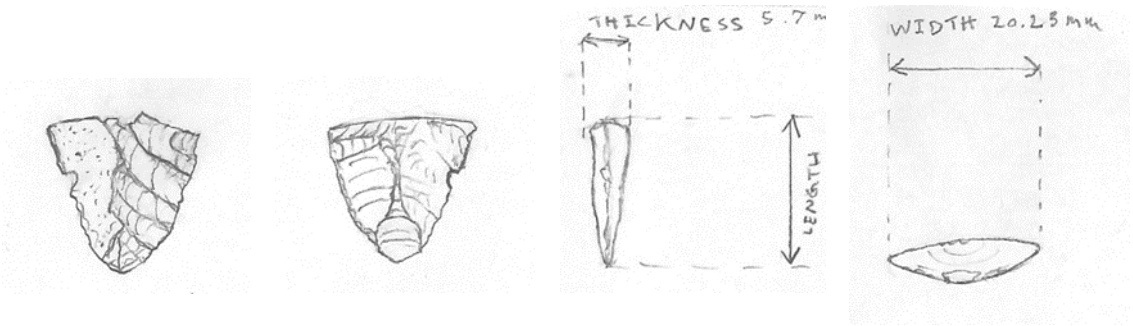


Figure 7.4. Sketches of cat #1460 obsidian bifacially-flaked tool. From left to right: cortex side; non-cortex side; profile (cortex side facing right); cross-section, (cortex side facing down). Measurements were first of three taken before being averaged. The sketches and measurements were made by the author.

The artifact was submitted to the Northwest Research Obsidian Studies Laboratory (NWROSL) for source analysis. The results of the X-Ray fluorescence analysis (see Appendix J) correlated cat #1460 with the Whitewater Ridge obsidian source in Oregon (Nyers 2020). A map of the location of the site and obsidian source is provided as Figure 7.5. Considering the obsidian had cortex, a non-local source was a surprising result. Of around 2,800 obsidian artifacts NWROSL has documented from Washington State, around 170 (6.1%) are from Whitewater Ridge (Alex Nyers, personal communication 2020). Whitewater Ridge obsidian was also found at the nearby Grissom site (45KT301) in the Kittitas Valley, comprising 4 of 51 samples analyzed by Parfitt and McCutcheon (2017).

Sources of obsidian outside of Washington are considered higher quality and having been traded such distances are usually reserved for formal technologies such as projectile points, with some exception (Parfitt and McCutcheon 2017). So, while cat #1460 is only complete enough to be defined as a bifacially-flaked tool, the fact that it is non-local obsidian increases the likeliness that it is, or was being formed into, a formal tool like a projectile point.

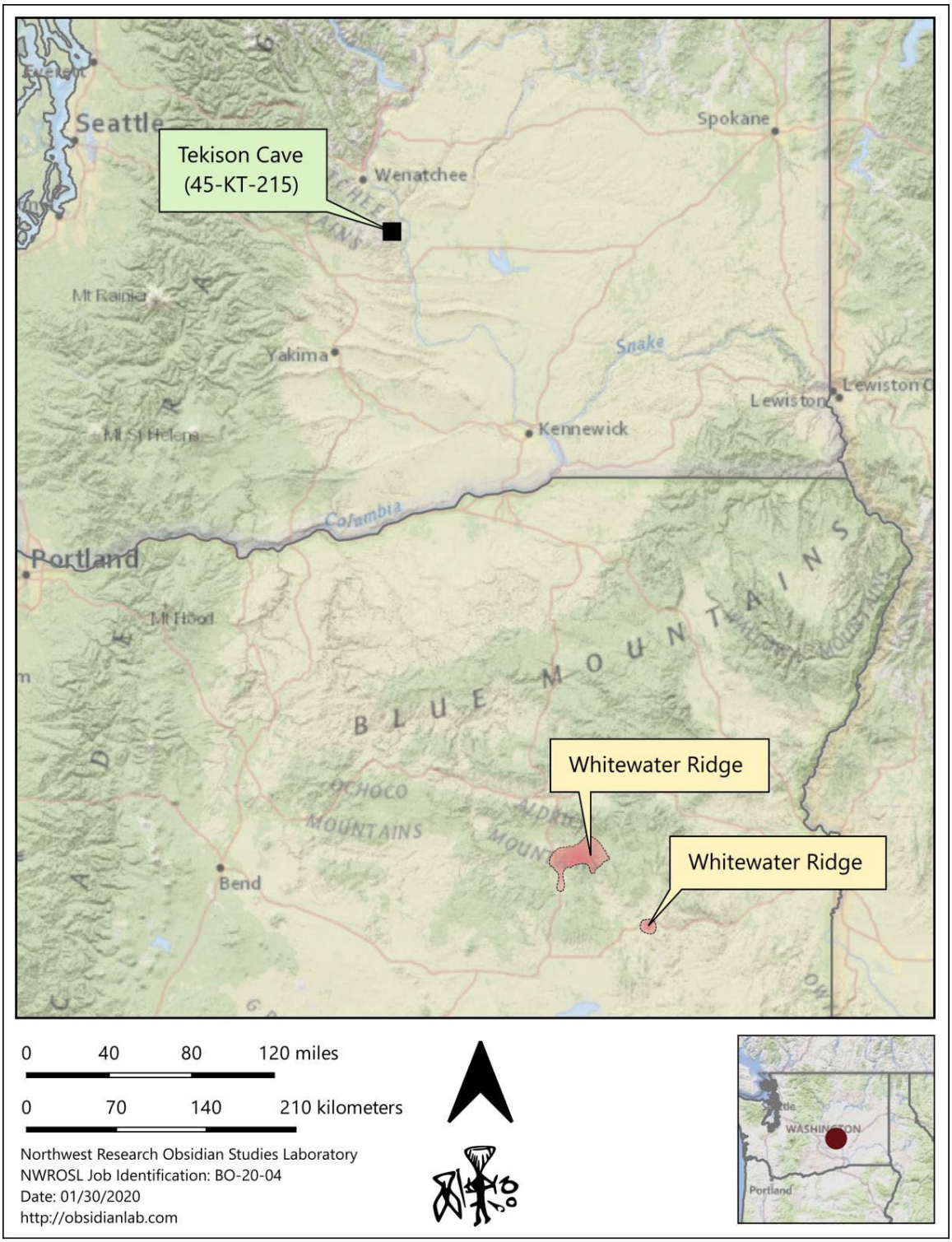


Figure 7.5. Location of the 45KT215 and obsidian source of cat #1460, Whitewater Ridge (Nyers 2020:2).

Cat #1460 is the only identified obsidian artifact from both the CWU-held collection and the avocational archaeologist's loan to CWU. All completely intact projectile points are still missing from the collection held at CWU. According to the document *Excavation at Tekison Rockshelter* (Johnson 1972-1975) there was only 1 other obsidian stone tool at the site. The document chapter "Lithic Artifacts" shows a sketch of "TC1-173-17," described as an obsidian projectile point fragment (see Figure 7.6) Although this specimen has a catalog number assigned by the Johnsons, there is no available provenience information. Like cat #1460, it is also broken on the Y axis parallel to the artifact. TC1-173-17 could be the other half of cat #1460, cat# 1460 itself, or another piece entirely. If this missing artifact was found, examining it would help contribute to understanding of obsidian use at the site.

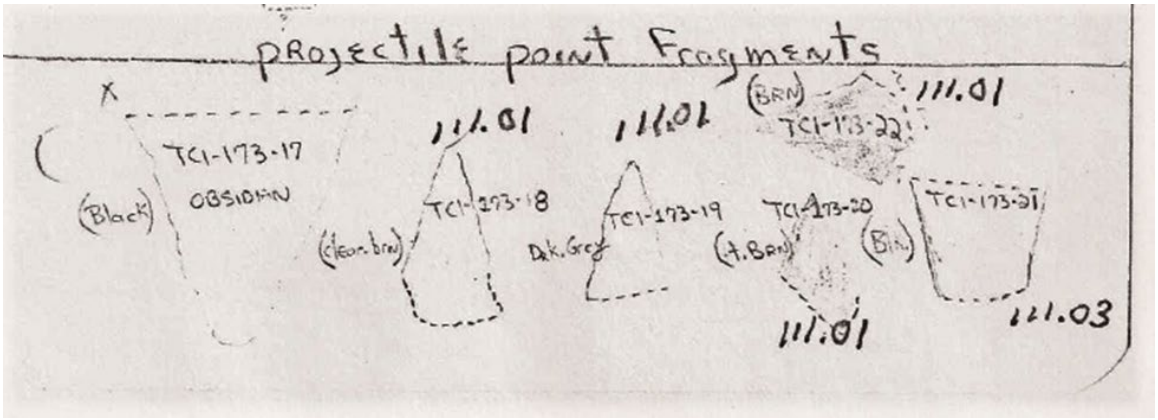


Figure 7.6. TC1-173 Projectile point fragments, including TC1-173-17 obsidian artifact. This is scanned from an unnumbered page of *Excavation at Tekison Rockshelter* (Johnson 1972-1975). NO scale was provided.

CHAPTER VIII

DESCENDANT COMMUNITY COLLABORATION

This chapter describes the results of descendant community collaboration. Throughout the research process, from planning to conducting analyses, I informed descendant communities. However, as discussed in Chapter II, collaboration goes beyond informing parties to involving them and adapting practices based on exchanges of knowledge, values, and ideas. This chapter describes the results of major descendant community collaborations. First, an oral history and interview with Colville Elder Randy Lewis is described and discussed. Second, the suggested access and use plan is introduced.

Oral History and Interview with Colville Elder Randy Lewis

This interview was arranged by Guy Moura (Colville Confederated Tribes [CCT] Tribal Historic Preservation Officer [THPO]) and Crystal Miller (CCT Traditional Cultural Property Sr. Coordinator). Crystal was present for the interview and audio/video recorded the interview for the tribes. She also passed along information on the site and my research to the elder prior to the interview (including my thesis abstract and proposal, list of potential interview themes and questions, photographs of the site (Figure 8.1) and artifacts, and a copy of NWAC sample faunal analysis poster printed on letter-size paper). Crystal also brought the most recent site form. Additionally, I brought several artifacts representative of the collection (Figure 8.2) and floor plans of the cave excavation.

Figure 8.1 Tekison Cave June 2019. Photo by the author.

Crystal asked Randy to begin by introducing himself and his family connections to the area:

> Thank you, thank you for being here and my name is Randy Lewis (K'ayaxan) My family- my great-grandfather is Sam, Samuel C. Miller and my grandfather is Jerome Miller, Wenatchi, Methow. My great-grandmother was Anastasia and my great-grandfather is Wenatchi, well Columbia Peter or Kittitas Peter, depending upon which area you are in. And my grandmother, my mother's mother, is Agnes Miller, Agnes Peter, Columbia Peter's daughter. All have very strong ties here and to the Kittitas. A lot of ties. And um, Wenatchi, Methow, Moses, uh

Figure 8.2 Selected artifacts from 45KT215 brought to interview with Randy Lewis. (from left to right: 136, 156, 149, 207a and b, 1141, 1309, 1502, 143).

> Okanogan, Entiat. What else? (Laughs) All of the western bands of the Colville reservation. And, great-grandma's side on [*unclear*] uh also, she was Wenatchi, Moses, and yeah Wenatchi Moses-Columbia, and Wanapum. So, connections down there are pretty solid too.

After we discussed the background of my research project, Randy shared his knowledge of Tekison Cave. He had both personal experiences and memories of the cave as well as connections to creation mythology:

> In 1954, or 52-through that period we had a house over in Ellensburg. And, so, the Kittitas area was kind of, um, familiar with my folks and my grand-folks. Um, the area that we're talking about here, the cave area , that's , there's a couple names for it. It's Groundhog's Eye. It's also púl'yaʔ, púl'yaʔ is how… is um Gopher. And, it goes back into historically and like it's our Creation Stories.
>
> Coyote was making way for man that was coming. That was his job, was to prepare the world. All of the animals. And when he arrived here, he caught mountain sheep, lĕmŭtŭ, preparing to ambush people. He didn't know who people were, but they didn't want to change. Coyote was a changer and he was changing things. And he was changing, preparing the animals. And when he came across them, they were sharpening their horns. They were sharpening their horns and they were singing, their song, their war song, preparing to ambush. And Coyote, smiyáw, comes across and says "[*unclear*], what are you doing?" And, they turned and they said, "we're preparing ourselves, we're readying ourselves. We're

going to ambush this man who is coming." Coyote gets very upset and turns to them and takes their song away, takes their powers away. All animals have songs. And he gave the song, he would give it to people from that point on. And then told them that they would be food for man who is coming. Man would wear your skins, man will use your horns for spoons and for implements. He split their feet (Randy makes hoof shapes with his hands). He took their hands away, he split their feet, shway shoot, split-hoof. And told them to go. And then he put, he told uh, he turned and he took the sisters púl'yaʔ and sxƛ̓útəltən, the groundhog and told them "you will keep an eye on this area. And when the roots start growing, púl'yaʔ will notify people, or come down and tell people." Because púl'yaʔ is blind, but púl'yaʔ will sing and let the people know that the roots are growing.

After sharing the creation story, Randy explains his family and personal memories of the site :

But it's also the time in which the bighorn sheep were in there. So, see this draw here [referring to figure 8.1], That draw was actually a deer and a mountain sheep drive, where they would drive them either up or down. Up here is kinda a box, so they would drive them into that, to be, access to be killed. And so, in 19 about 1954 or 55 I went there with my grand folks Jerome and Agnes Miller, my great-grandfather Sam Miller, that there were other people, the Piatote family, the Weipah family. This was their digging grounds. And this was also, I guess you would call it a bivouac area. 'Cause Grandpa and them would hunt this area. And Grandpa and his cousin Johnny Nason who lived there in the Naneum. They

would go up there and they would stay in that area. And Grandpa said the first time he was up there. About 1923 or 22. He stayed there for two and a half years down in the Kittitas, and they hunted this area. And he said, "We camped up here, built a fire, and all over on the ground, there were these, uh kind of crescent shape rocks, small ones, flakes." Well, turns out they're spoke shaves for sharpening their digging sticks. So, from that he gathered this is where they prepared themselves, this is where they prepared their roots and stuff when they would dig. This is where they sharpened their tools. But all over, he said, there was what we, they, would call flint chips everywhere. There were chips everywhere, lithic scatter. And he said, and there was evidence that people, but it didn't show, he said there was no water there. There wasn't really a water source there, except in the collection pools up here in the rimrock. He says there was no water source, so it's not a village site and it's not a permanent residence. That's the reason it's kinda referred to as a bivouac area. That's where hunters, see when you went hunting, old-old time people, they took with them their arrow heads and stuff. But they didn't sharpen them, and haft them until they got there. Otherwise they would shatter. So, that when they got there, they would prepare their tools and they went hunting. He said, well there was that evidence everywhere. He said there was, um, there was the mortars, the pestles, that were around there. So it shows evidence that it was a food preparation site as well.

In addition to sharing knowledge of the site, Randy had a lot of anecdotes to share about the types of artifacts from the cave. He identified a mussel shell (see figure 8.2, cat #1141) as a modified object, "it's a spokeshave….for sharpening your digging stick,"

rather than just debris, as we had cataloged it. This contribution was one of many that I would have been unaware of had I not had the opportunity to speak with Randy.

As noted in the purpose section in Chapter I, Colwell-Chanthaphonh and Ferguson (2006) state that incorporating descendant community knowledge can help archaeologists understand archaeological sites and material culture. Nicholas and Markey (2015) say that archaeologists have used indigenous knowledge when it supports their own findings, but ignore or discount it if it does not support so-called scientific evidence. However, Nicholas and Markey (2015) argue that that science should not be limited to a Western way of knowing and should support indigenous knowledge as a valid line of evidence for gathering and interpreting and archaeological data.

Access and Use Recommendations

Access and/or use policies vary widely in length, content, and purpose (e.g., Florida Museum 2007; NPS 2016c; Smithsonian Institution 2012). This variation makes it near impossible for a one-size-fits-all type of policy and makes it important for institutions to create policy based on their concerns and capabilities. The main concerns for the CWU-held Tekison collection are that access and use are encouraged, but in a manner that protects the collection and follows cultural guidelines of descendant communities. Therefore, to address these concerns and guide decision making, the suggested policy includes protocol sections on the authority to grant access and use, general protocols, and protocols based on intent and user role.

The recommended access and use policy was created through literature review (see Chapter II "The Care of Archaeological Collections"), discussions with department

faculty, and suggestions on access and use from Guy Moura (CCT THPO) and Randy Lewis. Here, I will describe the policy and how sections were drafted, for the complete policy, see Appendix H.

Purpose and definitions are the first things established in the policy. Access and use are defined as distinct terms. While they are often used interchangeably, Guy Moura stressed the differences between them and the importance of getting tribal approval for use. Roles are next defined as they are key components in the protocols. Roles are based on the user's position and qualifications in relation to access and use. Staff are limited to designated department faculty and approved CWU students. The owner is the WDFW. Descendant communities are the Confederated Tribes of the Colville Reservation, the Wanapum Band of Priest Rapids, and the Confederated Tribes and Bands of the Yakama Nation. A researcher is defined as a person utilizing the collection for research (who may or may not be part of the academic community). The public are simply members of the general public who don't belong to other categories. It is important to note that defined roles are specific to this collection. For example, the identified descendant communities in this case are all tribes. However, a collection from a historic locality may include other types of descendant communities.

Under protocol, the authority section describes who grants access and use permissions. Because of complexity of legal ownership, cultural ownership, and physical possession, this involves several parties. CWU has possessed the collection for decades, however WDFW is the lawful owner, therefore legally they are the first contact for any requests that CWU may have or receive. As important is permission from descendant communities. Katherine Kelly emphasized the WDFW's role; as a state agency they have

a legal obligation for a government-to-government relation with tribes (who are the descendant communities in this case). Therefore, WDFW will complete any official consultation with tribes. Thereafter, with permission from WDFW, CWU may informally collaborate with tribes on access and use. Mutual agreement of all three parties is the first step to grant access and use.

The general protocol describes what access and use decisions are based off of. There are several practicalities and obligations that must be considered. Departmental capabilities might include staff availability or research space offerings. Legal concerns might be protection of restricted archaeological site information. Ethical considerations may include descendant community requests. Preventative conservation depends on the type of artifact and its current condition. Excluding the most exhaustive of use policies (NPS 2016c), these types of generalizations are often the extent of detail described in an access policy. To address the concerns of this collection, I expand upon access and use considerations based on intent. The intent is differentiated from the role, because they may or may not be interchangeable. For example, a member of a descendant community may request the collection for cultural use. However, they may also request use of the collection for research.

The intent of an access or use request may take many forms, however the three major anticipated and encouraged uses of the collection are cultural, research, and educational. Cultural access and use is left open in the policy, as it is dependent on descendant community needs. Research could potentially include destructive or non-destructive analyses, however each instance needs approval. Education access is based upon recommendations from Randy Lewis. After looking at objects brought to the

interview (see the previous section of this chapter) I asked, "how do you think these objects should be displayed, or used, or shared?" His response was:

> "I think these are basically….they're utilitarian items. I wouldn't call them ceremonial items in any way. Um, mats were just a practical reality of, probably one of the most common objects you'd ever find. So I think they can be used to educate, show any age group, this is, this is what they ate, this is what they exploited as far as the natural resources. I would put it in conjunction with some of the roots that are around there. It gives you a better, a more um, broader idea of why they were there, cause like I said there's no water source to speak of. You're up on the crest of the big hill, so you don't have water usually except on the crest basin, which the animals seem to access a lot more. So, your purpose for being there is basically to go up, to exploit the resources that are there and take them back with you. Spend you know, a couple days, a few days maybe. And food preparation…. So I think it's important, that you know, one way of displaying this is to [ask]: What do you think this is? Ask, pose the question, why do you think this is? Why would a clam shell be up there? Why would it be up there? Well, two purposes. Spoke-shave, like I think that is [gestures to cat #1141]. And they also sharpened them and they would use them, the women would use them to skin the animals. A knife will cut the hide, but these won't, so they would use them, they would hold them [holds shell in hand], and like that [scraping motion] and it doesn't cut the hide. So, that's kinda cool. This is a little small for a skinner for a

scraper, but it's a definite spoke-shave in my mind. Yeah. So, pose the question to them. Why do you think there's rawhide there? What was rawhide used for?"

While much of this policy is already in practice by the department, I have to reiterate that this is a recommended policy. The recommended policy is not making drastic changes to informal procedures, but rather attempts to document, enhance, and formalize them. The biggest obstacle to officially implementing this policy is that there is no full-time dedicated archaeology department collections manager. This role is currently fulfilled as an additional duty assigned to a faculty member. This specifically creates a hardship for the part of the general protocol that states "Use must be supervised by staff at all times. For example, if the researcher is also a staff member, the researcher should not act as their own supervisor." This section was included at Guy Moura's suggestions and it was stressed that Tekison Cave has rare objects that need to be protected from theft. However inconvenient, there must be a way to ensure accountability. The clearest solution would be for the university to fund a full-time department archaeology collections manager. Additionally, such a position would contribute to ongoing departmental efforts to rehabilitate the department's archaeological collections and enact collection management policy.

While this access and use policy was created with the Tekison Cave collection in mind, the process of collaborating to create the policy could be applied to other collections.

CHAPTER IX

DISCUSSION AND CONCLUSIONS

This chapter concludes the thesis by discussing a summary of materials from Tekison Cave, a comparison to other selected Mid-Columbia Plateau sites, reflections on collaborating, connecting nostalgia and memory to objects and places, and stating further needs and uses for the collection.

Summary of Materials

Being a cave site, Tekison is unique in having a large number of preserved organics. Preserved organics in the collection include unmodified materials like animal bone, droppings, and grasses as well as a significant amount of modified or formed organic artifacts (for a complete count see Table 9.1). Two potentially confusing distinctions commonly made by archaeologists about material categories are relevant here, and this is Dr. Lubinski's spin on them. The first is the concept of "perishable" materials, which are materials typically not recovered in archaeological sites, including all uncarbonized plant materials. Among animal remains, bones are not considered perishable, but skin, fur, hooves, and feathers are examples of perishables. Another distinction is made between "artifacts" and non-artifactual materials, where the former have been notably modified by humans. Objects that have been minimally modified by humans might be considered "debris" and not "formal artifacts;" thus a bone shaped into a pin is an artifact ("TB: tool/ornament—modified bone" in this system), whereas bone fragments that are merely broken food debris are faunal remains (B in this system).

Table 9.1. Summary of Materials (CWU and Avocational-held Collections[1])

Material Code	Material Description	Total Catalog Numbers	Total Object Count[2]	Total Weights[3] (g)
B	faunal remains (unspecified)	1	1	
BB	faunal remains-- bone (non-fish)	122	1,812	
BE	faunal remains—perishable (e.g., hoof)	11	9	
BF	faunal remains-- fish	5	6	
BI	faunal remains-- insect	6	19	
BS	faunal remains-- shell	41	367	
C	C-14 / charcoal sample	38	771	
D	dropping/scat/fecal matter	55		6,081.63
E	perishable artifact (unspecified)	9	13	
EF	perishable artifact-- fauna (e.g., leather)	12	23	
ET	perishable artifact-- textile	64	213	
F	fill / float sample / sediment sample	15		2,390.61
H	historic artifact/debris (unspecified)	1	7	
L	lithic (unspecified)	35		11,477.50
LB	lithic-- chipped stone biface (not point)	3	3	
LD	lithic-- chipped stone debitage	45	263	
LG	lithic-- ground stone	1	1	
LO	lithic- chipped stone core	2	2	
LP	lithic-- projectile point	3	3	
MM	mounted material (multiple items in a mount or case)	2	2	
O	other sample	27		578.19
TL	tool/ornament- lithic (not chipped)	1	2	
TB	tool/ornament- modified bone	3	3	
UM	unsorted material (could include lithics, bone, charcoal, shell, etc.)	29		851.64
W	wood, root, or other perishable non-artifactual plant material	130		1,567.70
	Sum=	661	4,407	22,958.27

[1]These counts only include materials at CWU which have been entered into an Access database as of this thesis. The "CWU-held collection," refers to materials possessed by CWU since before this thesis and the "Avocational-held collection" refers to materials on loan in 2019 to CWU by Tom Johnson. For other materials excavated but not at CWU see Appendix E "1970s Artifact Catalog and Current Possession."

[2] These counts do not include difficult to quantify materials such as bundles of fur (BE), or bags of grass (W)

[3] These weights are only for categories of difficult to quantify material.

The majority of formed perishable artifacts were textiles (cordage and tule matting, coded as ET). There were also pieces of prepared leather, recorded with a new code EF, including cat #135, which had two pieces sewn together. In addition, other perishable artifacts (coded as E) included worked wood.

The textiles have not been analyzed or reviewed by an expert; however, I will describe their easily identifiable attributes. (For some images see Figures 8.2, 9.1 and 9.2). The matting is made primarily of tule and includes both twisted and non-twisted types. The cordage consists of both "S" (the majority) and "Z" twists. They are of varying thicknesses, ply, and material. Many are charred and some pieces are completely blackened. Much, but not all, of the cordage has been preserved by the Johnsons using glue.

Two objects were coded as MM for mounted materials. One object, cat# 1594, referred to as the "mirror mount," has matting, bark, and cordage mounted onto a mirror (see Figure 9.1). It has no associated provenience information; however, Tom and Sam have stated the materials are from Tekison and that their father was the one who adhered the materials to the mirror. There are pieces of cordage likely from separate textiles on top that are loose and/or falling off. These separate pieces should be removed, housed, and cataloged separately under guidance of a conservator.

The other mounted piece, cat# 1595, is a frame with three pieces of matting along with a stone pipe (see Figure 9.2). These objects are visible through the glass frame, but have not been removed from the frame for further examination as they appear to be currently stable. With a conservator's assistance and better housing these could be

Figure 9.1. Mirror mounted textiles. Cat#1594. This is a mirror about 18 x 12 inches, with an attached set of matting, bark bundles, and cordage, mounted onto the mirror. It is part of the Avocational-held Collection currently on loan to CWU. Scale is 10 cm long.

Figure 9.2. Framed matting and pipe. Cat #1595. Frame is around 12 x 24 inches. The frame is part of the Avocational-held Collection currently on loan to CWU.

removed, examined further, and cataloged. The matting has adhering tape labels TC1 for Tekison, but a catalog number is not readily visible. The stone pipe is not visibly labeled; however, it is presumably is the only pipe mentioned in the original artifact catalog (Johnson 1972-1975), described as a groundstone pipe, cat #60, found in 20A at 20 inches. It does not appear to be decorated, but as stated above has not been removed for a detailed examination. No other information was given in *The Excavation at Tekison Rockshelter* (Johnson 1972-1975).

Faunal material included bone debris coded as BB (or BF if it was readily identifiable by catalogers as fish bone), shell coded as BS and any other unmodified faunal material coded as B (for example insects or fur). Two new codes were created for unusual subcategories of faunal remains: BE for perishable, apparently unmodified faunal material like keratin (hooves, horn sheath), and fur found in the collection, and BI for insect remains. Worked bone/antler tools were coded as TB, and included three objects, a probable bone awl, and two possible antler tools.

There were significant numbers of probable non-cultural specimens in the collection, including 55 bags (6.1 kg) of animal droppings (code D), and 130 bags (1.5 kg) of apparently unaltered floral remains (code W). Some of the droppings had already been identified, separated, and labeled by CWAS as “rodent,” or “dimpled.” If they had already been separated, we cataloged them as such; however, we did not make an effort to sort out other bags of feces by types. Unaltered floral remains that were bagged separately and described in the catalog comments field were seeds, cactus, or other notable specimens like flowers. CWAS had identified some as chokecherry seeds. Otherwise, all unmodified plant material was kept bagged together.

The majority of non-perishable material is unmodified lithic (coded as L). This is mostly basalt pieces, as a result of natural rockfall in the cave. The next largest category would be lithic debitage (coded as LD). Only a small amount of formed chipped stone tools are currently part of the CWU-held collection. However, according to *Excavation at the Tekison Rockshelter* (Johnson 1972-1975), a large amount of formed projectile points were recovered from the cave.

The formed lithic artifacts include several chipped stone and groundstone artifacts. There are three biface fragments. Two are CCS and one is obsidian (see chapter "Archaeological Analysis" for details on the obsidian biface. The three projectile points in the CWU-held collection are CCS fragments (see figures 8.2. The ground stone is a hammerstone. There are also two CCS cores and 263 pieces of lithic debitage (debris from stone tool manufacture). The debitage appeared to be mostly CCS, but was not analyzed. The historic artifacts are debris from the excavation including wire, tape, and plastic scraps. The two non-chipped lithic artifacts were not described during cataloging.

As a result of the rehabilitation cataloguing process, we have a summary of excavation proveniences recorded on tags with the rehoused materials. That information was used to create a table of proveniences Test Pit A are the units 6G, 6H, 7G, and 7H. Excavation was primarily near the back wall of the cave. These units tend to have more materials as they were those excavated in bulk rather than picking and choosing selected artifacts (see Chapter V "Avocational Excavation").

Table 9.2. Summary of Excavated Proveniences and Tabulated Material Counts[1]

Unit	Known Depths (inches)	Fauna Count[2]	Perishable Count[2]	Lithic Count[2]	Notes
6G	41-46, 52-55, 59-60	106	9	29	
6H	36-40, 46-53, 58-59	84	1	0	
6N	Unknown	238	0	31	See [3]
7E	25-30	2	4	1	
7F	25-30	9	1	0	
7G	Surface, 36-44, 51-55	57	0	0	
7H	Surface-36, 36-44, 41-50, 63	248	11	17	
8F	Unknown	50	0	0	
9I	Surface	1	0	0	
10F	24, 26.5, 30	2	3	0	
11D	19-25	8	0	3	
11F	26	0	1	0	
11H	8.5-14, 13-18, 16-22	8	1	1	
13F	15.5, 25.5-35.5	2	1	0	
13G	14, 15, 19, 19-24, 22, Unknown	33	1	0	
13I	Unknown	1	0	0	
14F	19-25, 25.5-27.5, 28-35	42	2	10	
14G	13, 19-24	9	0	0	
15D	38	3	0	0	
15E	Unknown	2	0	0	
15G	13.5, Unknown	2	0	1	
15H	9	0	1	0	
15H/16H	Surface-14	116	0	22	
15I	Surface	2	0	0	
16A	27	0	1	0	
16G	Surface-8	23	0	0	
17B/17C	25-29	0	1	0	
17C	38.5-46.5, 46.5	10	14	5	
17C/18C	16-23	121	1	0	
17E	Unknown	6	0	0	
17G	13	0	3	0	
17H	Surface-7	15	0	0	
18B	27-31, 28.5-31, 31-38, 32, 32-38, 38	37	5	8	

Table 9.2. Summary of Excavated Proveniences and Tabulated Material Counts[1] (continued)

Unit	Known Depths (inches)	Fauna Count[2]	Perishable Count[2]	Lithic Count[2]	Notes
18C	24-34, 27.5-32, 29, 29-34, 32-38, 32-43, 38, 43-45, 48, 48-56, Unknown	181	69	39	
18D	44, 44-Unknown, 48-58, Unknown	49	5	2	
18E	23-30, 31-36, Unknown	110	2	5	
18G	9.5	3	0	7	
19C	31-35.5, 33, 33.5, 35.5, 38, 39, 39-46	16	10	0	
19D	22, 22-28, 22-Unknown, 24, 28-31, 38, 43, 43-52, Unknown	85	9	23	
19E	23-31, 31-38	12	3	3	
20B	36	7	0	1	
22B/23B	22-23	75	0	1	
22C	25-28	1	0	2	
22D	22, 24, 26, 27	12	2	0	
22D/23D/24D	Surface	18	0	0	
22F	32	2	0	0	
22G	19.4	0	3	0	
23C/23D	Unknown	2	0	0	
23G	Surface-33, 33	7	0	0	
24G	Surface	1	0	0	
25D	31.6	0	1	0	
25G	Surface-33	2	0	0	
26D	41	0	2	0	
Test Pit A	55-59, 59-63.5	286	4	14	
Unknown	12-24, 24-32, 41-50, Unknown	171	14	21	
	Sum=	2,039	207	295	

[1] Excludes materials weighed in bulk rather than counted individually, as well as 771 fragments of charcoal, 7 historic artifacts, three bone tools, and two lithic artifacts (not chipped).

[2] Counts are derived from materials in CWU possession at the time of this thesis. Fauna counts are all B codes, perishable counts all E codes, and lithic counts all chipped or ground stone codes (including LB, LD, LG, LO, LP, but not L). Fauna count likely includes most collected in excavation, but it is uncertain if all faunal remains excavated were kept. Perishable counts are for recognizable perishable artifacts only (e.g., cordage, worked leather), not for unaltered vegetal matter. It is uncertain how many perishable artifacts might still be held in private collections. Lithic counts are for chipped and ground stone tools, and omit basalt fragments. These counts are likely the most underrepresented, as it is known that significant numbers of chipped stone tools are held in private collections.

[3] This information was from a CWAS bag, not original field tag. It is likely a mistake and is really 6H.

Comparison to Other Mid-Columbia Plateau Sites

Because there are not as many documented cave and rockshelter sites as open-air sites, the several sites I will compare to Tekison will include both types. I will compare the selected sites from the closest to furthest proximity from Tekison Cave.

As stated in Chapter III, the Sunset Creek site (45KT28) is a habitation site along the Columbia River, 5.75 miles away from Tekison Cave. Based on the radiocarbon dates from Tekison Cave, the closet matching phase at the Sunset Creek site would be the Cayuse Phase. The majority of analysis on the Sunset Creek Site was focused on projectile points. If recovered, projectile points from Tekison Cave could be compared with the Sunset Creek collection. There was not a faunal analysis of bone debris, but many of the 465 bone and antler artifacts were described (Nelson 1969). They included objects like awls made from deer, pendants from elk and bird, pins from mammal long bones, and an antler comb (Nelson 1969). Many of these were decorated with techniques such as incising, where the bone is carved to make patterns or images.

While the Sunset Creek site itself did yield bone and shell artifacts, it was the nearby rockshelters, documented in Appendix C "Perishables from Eight Rockshelters on Quilomene Bar," that additionally had cordage, matting, and basketry (Nelson 1969). One cave was designated with the Smithsonian number 45KT48, while the rest were informally named Site 1-7 (Nelson 1969). None of the textiles were identified as tule, but instead were said to be from sage, cattail, cedar or juniper, and ryegrass (Nelson 1969.) Intriguingly, Site 1 also had a horn core of a mountain sheep, which was not found at the Sunset Creek site itself (Nelson 1969).

While Tekison Cave lies west of the Columbia River, a cave with interesting similarities lies on the east side. The Chief Moses Council Cave/Moses Coulee Cave (45DO331) is a cave that was looted as well as disturbed by the landowner in 1934 (McClure 1979). Artifacts retrieved from the cave include a pipe, faunal remains, including bighorn sheep and shell, and sagebrush matting (Lyman 1995). Lyman's faunal analysis showed it was one of only two Plateau sites analyzed to 1995 with an overwhelming percentage of the analyzed fauna being bighorn sheep.

The Wa-Pai-Xie site (45KT241) is the furthest site compared in this section. There are both cave and rockshelter components, which were looted before formal archaeological documentation (Chatters 1979). It is located near the Columbia River on the Yakima Training Center in southern Kittitas County. The rockshelter has deposits of basalt rockfall, plant, and animal droppings. Chipped stone flakes, bone, and tule mat pieces were in both disturbed and undisturbed deposits.

While neighboring habitation sites like the Sunset Creek Site are in closer proximity than cave sites, the type of materials recovered from Tekison are more similar to cave sites throughout the Mid-Columbia Plateau. So, while there may be trade or seasonal round connections to nearby habitation sites, the materials and resulting interpretations of Tekison are more similar to other cave and rockshelter sites in the mid-Columbia, in spite of being further away. Cave sites appear to share a commonality of debris from expedient manufacturing and processing. Sheep also appear to have been processed at these type of sites.

We know from the radiocarbon dating that Tekison Cave was used at least as early as the Cayuse Phase, some time before European contact. Johnson (1972-1975)

reported a “Russian” glass bead at the site, indicating the Cave was also used into the historic period. In addition, Randy Lewis spoke about his recent ancestors using the area as digging and hunting grounds. In the Plateau culture area, the Cayuse phase is known to be a time where winter villages near major rivers were the primary habitation sites (Galm et al 1981). Considering Tekison was certainly used in the Cayuse phase, is located further inland near only seasonal water sources, and the types of artifacts from the cave mostly represent hunting and gathering items, it was almost certainly not a long-term habitation site.

Most evidence points to the site primarily being a seasonal hunting, gathering, and processing site. This includes Randy Lewis’s account of ancestral usage, processing artifacts like spokeshaves, as well as faunal remains with stone tool cut marks and impact notches, and a lack of artifacts or features which would indicate habitation. However, Randy emphasized the that the pipe from the cave, combined with his knowledge of rock art nearby, indicate there likely was some ceremony that took place at the cave. Some other artifacts like tule matting or features like the nearby cairns and talus pits are currently more ambiguous without further investigation, having multiple possible uses.

One additional commonality amongst the sites is that they were all looted or disturbed before professional archaeological documentation. The ubiquity of disturbed sites in the Plateau region adds to the importance of working with avocational archaeologists to recover information that allows for interpretation and understanding of Plateau sites.

Flexibility in Collaboration

The goals of this thesis could not have been accomplished without the generous assistance of stakeholders. The beginning stages of planning research were directed by the goal of rehabilitating the collection and creating an access policy with stakeholder input. Due to the nature of collaborating, other smaller goals to had to be flexible and re-evaluated as I went along.

When I began this thesis, the names of the avocational archaeologists who excavated the Cave were known to department staff, but it was unknown if landowners or tribes would give us permission to work with them. Also, there was the question of whether the avocational archaeologists would even be willing to collaborate with us. Fortunately, it ended up being that the landowners and tribes gave permission and would prefer to learn as much about the collection as possible. Additionally, the avocational archaeologists ended up being enthusiastic about contributing to the project. One particular family member (Tom Johnson) ended up being in possession of numerous textiles from the site, but not the missing projectile points. He provided considerable information and records, and access to family collections.

I originally proposed to conduct interviews with tribal cultural resource departments and any individuals they recommended. Admittedly, this is was asking a huge favor of busy tribal cultural resource departments. The Colville were able to respond with suggestions and additionally offered to search for a knowledgeable elder who could be interviewed with their involvement. Other tribes did acknowledge and respond to specific research permission requests (like completing the faunal analysis), but did not respond to requests for interviews. There may be several reasons. The first, could

possibly be lack of interest. However, it could be that their cultural resource departments just didn't have the time, or that email was not the best form of communication. It is likely that they are simply too busy, regardless of interest, based on a comment Dr. Lubinski received from a tribal cultural resource specialist, who noted that his department received more than 50 such requests every week. I had a hard time balancing the feeling I was overwhelming stakeholders with requests versus fulfilling my responsibility to reach out and follow-up.

Randy Lewis shared the comment "It has many faces to it," near the end of our interview, and the phrase has stuck with me. While it was in reference to the cave, I felt like it could be said of the entire project. By the time I had interviewed Randy, I had been working with the collection for over a year: doing background research on the area, creating a cataloging plan with my advisors, working with the avocational archaeologist, cataloging the collection with a team from various backgrounds, doing analyses and presentations. There was already a numerous exchange of knowledge and ideas throughout this time. Sometimes I was in the position of the teacher, often times as the learner. I learned about the site, the excavation, and the collection from many different perspectives.

Nostalgia and Memory in Objects and Places

In *Wisdom Sits in Places*, Basso (1996) explored how places hold meaning. Phrases Basso (1996) used to describe the concepts that people attach to place include values, thoughts, sensibilities, local knowledge, and social importance. Being that

memory includes these things, it could also be said that memory sits in places (Nora 1989).

Basso (1996:xvi) states that "senses of place, while always informed by bodies of local knowledge, are finally the possessions of particular individuals. People, not cultures, sense places." This is important to note, because Tekison Cave is a place that has been experienced by many people who attach thoughts and feelings to it. This became apparent when I asked interview questions, similar to Basso (1996:xvi), "about places and place-names and the stories that lie behind them." The avocational archaeologist relayed the story of how his family named the site Tekison Cave almost every time we spoke. They named it Tekison Cave to throw people off the trail, as it is not actually on Tekison Creek. Their naming of the cave was attached to their perceived role of protecting the cave, which also embodies their experience with directing the avocational excavation in a way that saved contextual information, as opposed to looting. Contrastingly, Randy Lewis shared the name, púl'yaʔ, from a Colville descendant community perspective. Púl'yaʔ is attached to both experiences Randy personally had (as he recounted earlier), as well as a place connected to creation stories, to a place of tradition; "It's Groundhog's Eye. It's also púl'yaʔ….púl'yaʔ will sing and let the people know that the roots are growing"

Nora (1989) discussed that memories are tied to objects and places. Nora (1989:8) also stated that "memory only accommodates those facts that suit it; it nourishes recollections that may be out of focus." Due to the flexibility of memory, people both keep and care for objects and places as keepers for memories as well as use them to facilitate recovering memories.

Further Needs and Uses for the Collection

The interest, complexity, and accessibility of the collection leads to numerous potential uses of the collection (and site). Along with the use potential, there are of course limitations and further needs to improve the condition and knowledge of the collection and site. Here I recommend further opportunities for site fieldwork, curatorial improvements, access and use of the collection, collaborations, and rehabilitation of additional materials that are possibly from Tekison Cave.

Fieldwork opportunities (with intentions, approval, and collaborations with tribes and WDFW) could range from survey to excavation. Survey would be useful for areas adjacent to the cave. Randy Lewis noted during the interview that he recalled there were two petroglyphs up the draw. He said, "one of them is a mountain sheep. But I don't recall if the other one was a sun or a sunflower. But, there's a mountain sheep one. I wouldn't be surprised if this wasn't a vision quest site. I think if a person were to do a reconnaissance of the ridge here, you're probably gonna find artifacts that were left here by the person. Because, generally that's in conjunction with petroglyphs." Additionally, his grandma referred to the cave as the middle eye, suggesting that there may be other nearby cave sites to document.

While excavations have been on the decline in the U.S. in recent decades, if excavation was approved at Tekison Cave, there could be more information about the site documented. During the site revisit in June 2019, the surface itself was littered with dozens of artifacts. Johnson noted that he made deliberate efforts to stop excavation at what has been described as a rockfall layer. If this is truly rockfall and not bedrock, there may be earlier deposits. With the excellent preservation conditions of the site, there is

potential to find more organic artifacts below this unexcavated layer. Some department and CWAS archaeologists have expressed the exciting possibility that with its good state of preservation and protective rockfall layer, the site could have a currently undocumented, very old component underneath (Lubinski, personal communication, 2020).

Since the rehabilitation has increased accessibility, there is a huge amount of collection research potential. While I completed a sample faunal analysis, it was only a fragment of the cataloged materials (170 of 1817 bones). In addition to basic macroscopic faunal analyses, advanced analysis like DNA research could be used for topics like comparing genetic structure and diversity of precontact and historic animal stocks (e.g., Speller et al. 2014). Research potential on the other perishable materials is also limitless. For example, Held (2006) describes how examining textile variations can give clues to trade, intermarriage, ethnic groupings. While the currently accessible number of stone tools is limited, there is a fair amount of lithic debitage that can be researched.

In discussing accessibility, Benden and Taft (2019) acknowledge that the needs of different user roles are distinct and need to be understood in creating databases. The Access database used for Tekison Cave is useful for archaeological researchers and staff to search the collection by material type and provenience. This database, which is currently only accessible by the department, may not be as useful for general public or descendant community access. As a solution to this, other data management systems may be useful to incorporate in the future such as *Mukurtu*. This is a content management system that incorporates features that allows for multiple levels of content levels for users, with protecting traditional knowledge in mind (Mukurtu 2020). It is open-source

and free, although it is not yet widely as adopted or known as other CMS programs like Past Perfect. A physical and/or digital exhibit using access recommendations would benefit all parties, particularly the public who have more limited access.

There are also further opportunities for collection work. While the rehabilitation greatly improved preventative conservation conditions, I had to work with what materials I had. I created a supply budget (see Table 6.1) before knowing CWU would be receiving a loan of textile artifacts. The textiles are currently stable but could have improved housing with custom storage mounts. Additionally, there are still CWU-held materials designated as "possibly Tekison Cave," with unknown provenience information. Rehabilitation of this collection of materials and comparative analysis to the known Tekison Cave collection could contribute to determining with confidence if materials are indeed from Tekison Cave.

Deaccessioning is a possibility for some of the collection, such as the large number of unmodified plant materials, animal droppings, or unmodified basalt rockfall fragments. Deaccessioning is a noted step to improving the curation crisis by disposing of objects without research value, thereby saving curatorial space, supplies, and professional time (Bawaya 2007, Reichhardt 2007). However, the concept of value is touchy and it can be difficult to determine what does not have research value. Currently, there are no federal deaccessioning regulations or criteria for determining long-term research value (Benden and Taft 2019). One factor that makes deaccessioning difficult is the possibility of future methods that could be used on objects that are not utilized by current methods (Reichhardt 2007). It is also impossible to fathom all research questions and ensure they are all considered in the deaccessioning process. Therefore, a conservative archaeologist

may be inclined to keep every object initially collected. However, supporters of deaccessioning are more concerned about the problems caused by keeping objects without research value, saying that documentation and saving a representative sample should be sufficient for investigating future research questions (Reichhardt 2007).

Because space was not a large concern to CWU and the amount of potential objects to deaccession from the Tekison Cave collection was small, it was decided to retain them. Currently, the most probable candidates for deaccessioning are the unmodified basalt pieces. One of the few foreseeable uses of this material is using it as part of comparing the make-up of known Tekison Cave and the "possibly" Tekison Cave materials. If space should be a concern in the future, stakeholders of the collection could explore the possibility of deaccessioning certain non-artifactual materials from the cave.

To document unaccounted artifacts, further collaboration with the Johnsons, as well as the Coopers, could lead to more findings. There are some contacts shared with me, that are known to the department, who could potentially be reached. As the families conducted collecting throughout the Plateau region, there is potential to learn more about other sites as well.

When I was looking for a collection to work with for my thesis, I was offered the Tekison collection—with the caveat that it depended on how much of a challenge I wanted. This research was indeed a challenge, but it also resulted in the opportunity to work with many different people and perspectives. I was able to incorporate ethnography into archaeological collections management. Collaborators came together to share different ways of knowing, integrating traditional knowledge, best current museum practices, and the history of the archaeological investigation. This has benefited the

Tekison collection in multiple ways, including the care and use potential of the collection. While we cannot predict how the collection will be used in the future, these contributions will be an everlasting influence for future researchers and users.

REFERENCES CITED

36 CFR 79
2006 Curation of Federally Owned and Administered Archaeological Collections. *Code of Federal Regulation* Title 36, Pt 79.

Alberg, Winnifred
2012 Tekison Rock Shelter. [Three page report describing results of Tekison site material sorting for ANTH 496 credit with Dr. Lubinski]. Manuscript on file, Department of Anthropology, Central Washington University, Ellensburg..

Ames, K. M., D. E. Dumond, J. R. Galm and R. Minor
1998 Prehistory of the Southern Plateau. In *Plateau*, edited by Deward E. Walker, Jr., pp. 103-119. Handbook of North American Indians, vol. 12, William C. Sturtevant, general editor. Smithsonian Institution, Washington, DC.

Anastasio, Angelo
1972 The Southern Plateau: An Ecological Analysis of Intergroup Relations. *Northwest Anthropological Research Notes* 6(2):109-229.

Anderson, Jackey
2019 Tekison Cave Sample Faunal Analysis. Poster presented at the Northwest Anthropological Conference, Kennewick, Washington.

Andrefsky, William
2004 Materials and Contexts for a Culture History of the Columbia Plateau. In *Complex Hunter-Gatherers: Evolution and Organization of Prehistoric Communities on the Plateau pf Northwestern North American*, edited by William C. Prentiss and Ian Kuijt, pp. 23-35. The University of Utah Press, Salt Lake City.

Andrews, Peter
1990 *Owls, Caves, and Fossils: Predation, Preservation, and Accumulation of Small Mammal Bones in Caves, with an Analysis of the Pleistocene Cave Faunas from Westbury-sub-Mendip*, *Somerset, UK*. University of Chicago Press, Chicago.

Anglin, Ron
1995 *Forgotten Trails: Historical Sources of Columbia's Big Bend Country*. Washington State University Press, Pullman, Washington.

Arendt, Beatrix
2013 Making it Work: Using Archaeology to Build Job Skills for Careers Other Than Archaeology. *Public Archaeology* 12(2):79-100.

Arizona State Museum
2004 Requirements for the Preperation of Archaeological Project Collections for Submission to the Arizona State Museum. Electronic Document, https://statemuseum.arizona.edu/sites/default/files/repository_manual.pdf , accessed March 3, 2020.

Association of Academic Museums and Galleries (AAMG)
2019 Mission. Electronic document, https://www.aamg-us.org/wp/about-us/mission-statement/, accessed January 20, 2019.

Atalay, Sonya
2006 Indigenous Archaeology as Decolonizing Practice. *American Indian Quarterly* 30(3/4):280-310.

Barker, Alex W.
2004 Stewardship, Collections Integrity, and Long-term Research Value. In *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship*, edited by S. Terry Childs, pp. 25-41. Society for American Archaeology, Washington, DC.

Basso
1996 *Wisdom Sits in Places*. University of New Mexico Press, Albuquerque.

Bawaya, Michael
2007 Curation in Crisis. *Science* 317(5841):1025-1026.

Benden, Danielle M., and Mara C. Taft
2019 A Long View of Archaeological Collections Care, Preservation, and Management. *Advances in Archaeological Practice* 7(3):217-223.

Bernard, Russel H.
2011 *Research Methods in Anthropology*. AltaMira Press, New York.

Boxberger, Daniel L., and Stacy Rasmus
2000 Review of Traditional Historical and Ethnographic Information in Kennewick Man Cultural Affiliation Report. Electronic document, https://www.nps.gov/archeology/kennewick/boxberger.htm, accessed January 20, 2019

Browman, David L., and David A. Munsell
1969 Columbia Plateau Prehistory: Cultural Development and Impinging Influences. *American Antiquity* 34(3): 249-264.

Buck, Rebecca A., and Jean Allman Gilmore
2010 *MRM5: Museum Registration Methods*. AAM Press, Washington DC.

Burke Museum
2013 Mammals of Washington. Electronic document, http://collections.burkemuseum.org/mamwash/, accessed August 30, 2014.
2018a Guidelines for Preparing Archaeological Collections for Curation at the Burke. Electronic Document, https://www.burkemuseum.org/sites/default/files/2019-07/Burke-curation-guidelines-v1.5-081118.pdf, accessed March 3, 2020.
2018b Twitter post. March 9, 2018, 9:08 AM. https://twitter.com/burkemuseum/status/972157084736282625
2019 Culture Collections. Electronic document, https://www.burkemuseum.org/research-and-collections/culture/collections, accessed February 16, 2019.

Carman, John, Garry D. Carnegie, and Peter W. Wolnizer
1999 Is Archaeological Valuation an Accounting Matter? *Antiquity* 73:143-148.

Carnell, Clarisse and Rebecca Buck
2010 Acquisitions and Accessioning. In *MRM5: Museum Registration Methods*, edited by Rebecca A. Buck and Jean Allman Gilmore, pp. 44-52. AAM Press, Washington DC.

Carter, James A.
2017 A Typological Key for Projectile Points from the Central Columbia Basin. *Archaeology in Washington* 18:25-46.

Chan, Alexandra
2010 Translating Archaeology for the Public: Empowering and Engaging Museum Goers with the Past. *International Journal of Heritage Studies* 17(2):169-189.

Chartkoff, Joseph L.
1983 A Rock Feature Complex from Northwestern California. *American Antiquity* 48(4):745-760.

Childs, S. Terry, and Lynne P. Sullivan
2004 Archaeological Stewardship: It's About Both Collections and Sites. In *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship*, edited by S. Terry Childs, pp. 3-21. Society for American Archaeology, Washington, DC.

Childs, S. Terry, and Mark S. Warner
2019 Introduction: Progressing with Collections. In *Using and Curating Archaeological Collections*, edited by S. Terry Childs and Mark S. Warner, pp.v-ix. Society for American Archaeology, Washington DC.

Colwell-Chanthaphonh, Chip, and T.J. Ferguson
2006 Memory Pieces and Footprints: Multivocality and the Meanings of Ancient Times and Ancestral Places among the Zuni and Hopi. *American Anthropologist* 108(1) 148-162.

Colwell-Chanthaphonh, Chip T.J. Ferguson, Dorothy Lippert, Randall H. McGuire, George P. Nicholas, Joe E. Watkins, and Larry J. Zimmerman
2010 The Premise and Promise of Indigenous Archaeology. *American Antiquity* 75(2) 228-238.

Confederated Tribes of the Colville Reservation
2019 Demographics. Electronic document, https://www.cct-hsy.com/demographics/. Accessed May 12, 2019.

Daehnke, Jon D.
2007 A 'Strange Multiplicity' of Voices: Heritage Stewardship, Contested Sites, and Colonial Legacies on the Columbia River. *Journal of Social Archaeology* 7(2):250-275.

Department of Archaeology and Historic Preservation (DAHP)
2019a Collections. Electronic document, https://dahp.wa.gov/archaeology/collections, accessed January 20, 2019.
2019b WISAARD. Electronic document, https://dahp.wa.gov/project-review/wisaard-system, accessed January 20, 2019.

DirectAMS
2019 Bone & Animal Protein. Electronic document, https://www.directams.com/bone, accessed November 11, 2019.

Dixon, Susan L, and R. Lee Lyman
1996 On the Holocene History of Elk (*Cervus elaphus*) in Eastern Washington. *Northwest Science* 70:262-272.

Douglass, Mathew, Dennis Kuhnel, Matthew Magnani, Luke Hittner, Michael Chodoronek, and Samantha Porter
2017 Community Outreach, Digital Heritage, and Private Collections: A Case Study from the North American Great Plains. *World Archaeology* 49(5):623-638.

Drew, Natalie M.
2004 Preserving Archaeological Associated Records. In *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship*, edited by S. Terry Childs, pp. 55-66. Society for American Archaeology, Washington, DC.

Elia, Ricardo J.
1997 Looting, Collecting, and the Destruction of Archaeological Resources. *Nonrenewable Resources* 6(2):85-98.

Environmental Science Associates (ESA)
2013 Kittitas County Shoreline Inventory and Characterization Report. Electronic document, https://www.co.kittitas.wa.us/uploads/documents/cds/smp/reports/Cover%20and%20Table%20of%20Contents.pdf, accessed February 4, 2019.

Ferguson, Bob
1972 New Roles for the Amateur Archaeologist. *American Antiquity* 37(1):1-2.

Finch, Peggy Smith
1988 The Essential Collections Inventory. In *Registrars on Record Essays on Museum Collection Management*, edited by Mary Case. American Association of Museums, Washington, DC.

Florida Museum
2007 Collections Policy. Electronic document, https://www.floridamuseum.ufl.edu/collections/policy/#Access-to-Collections, accessed February 4, 2019

Frieman, Catherine J., and Lisa Janz
2018 A Very Remote Storage Box Indeed: The Importance of Doing Archaeology with Old Museum Collections. *Journal of Field Archaeology* 43(4):257-268.

Frison, G. C.
1991 *Prehistoric Hunters of the High Plains.* 2nd ed. Academic Press, San Diego.

Galm, J. R., G. D. Hartmann, R. A. Masten, and G. O. Stephenson
1981 *A Cultural Resources Overview of the Bonneville Power Administration's Mid-Columbia Project, Central Washington*. Bonneville Cultural Resources Group Report No. 100-16. Eastern Washington University Reports in Archaeology and History. Cheney, Washington.

Gazi, Andromache
2014 Exhibition Ethics - An Overview of Major Issues. *Journal of Conservation and Museum Studies* 12(1):1-10.

Greengo, Robert E.
1986 *Prehistory of the Priest Rapids - Wanapum Region, Columbia River, Washington*, 3 Vols. BAR International Series 290 (i-iii). British Archaeological Reports, Oxford, England.

Haakenson, Sven, Jr.
2004 Why Should American Indian Objects Be Preserved? In *Caring for American Indian Objects: A Practical and Cultural Guide*, edited by Sherelyn Odgen, pp.3-6. Minnesota Historical Society, St. Paul.

Hart Siobhan M.
2014 Digging and Destruction: Artifact Collecting as Meaningful Social Practice. *International Journal of Heritage Studies* 350:1-28.

Hegmon, Michelle, James R. McGrath, and Marit K. Munson
2017 The Potential and Pitfalls of Large Multi-Source Collections: Insights from the Analysis of Mimbres Gender Imagery. *Advances in Archaeological Practice* 5(2):138-146.

Held, Rhiannon Kathryn
2006 Textiles and Ethnic Groupings on the Columbia Plateau. Master's Thesis Master of Arts in Anthropology, Washington State University, Pullman, Wa.

Henebry-DeLeon, Lourdes
2018 Presentation on the network of collectors, archaeologists, sites and objects on the mid-Columbia. Archaeology Days at Grant PUD October 30, 2018, Mattawa Wa.

Hunn, Eugene, and James Selam
1990 *Nch'i Wána "The Big River":Mid Columbia Indians and Their Land.* University of Washington Press, Seattle.

Hunn, Eugene S., Nancy J. Turner, and David H. French
1998 Ethnobiology and Subsistence. In *Plateau,* edited by William C. Sturtevant, pp. 525-545, Handbook of North American Indians, Vol. 12, Smithsonian Institution, Washington, DC.

Hutchins, James, and Dwight D. Simons
1999 Archaeological Investigations at Tucker Hill, Lake County, Oregon. Journal of California and Great Basin Anthropology 21(1):112-124.

Johnson, Paula
2000a *Condition Report*. Paragon Research Associates. Submitted to CWU Department of Anthropology and Museum Studies.
2000b Old Hospital Box Inventory. On file, Department of Anthropology and Museum Studies, Central Washington University, Ellensburg.

Johnson, Tom
1972-1975 Excavation at the Tekison Rockshelter. Manuscript on file, Department of Anthropology, Central Washington University, Ellensburg.

Johnson, Tom and Johnson, Lenny
1972-1975 Excavation at the Tekison Rockshelter Rough Draft and Miscellaneous Notes. Manuscript on File, Department of Anthropology, Central Washington University, Ellensburg.

Kassa, Sonja C.
2014 The Archaeology of Obsidian Occurrences in Stone Tool Manufacture and Use Along Two Reaches of the Norther Mid-Columbia. Master's Thesis Master of Cultural and Environmental Resource Management, Central Washington University, Ellensburg, Washington.

Kassa, Sonja C., and Patrick T. McCutcheon
2016 The Archaeology of Obsidian Occurences in Stone Tool Manufacture and Use Along Two Reaches of the Norther Mid-Columbia. *Journal of Northwest Anthropology* 50(1):79-102.

Kelley, Jane H.
1963 Some Thoughts on Amateur Archaeology. *American Antiquity* 28(3):394-396.

Kelly, Katherine M.
2008 Cairn Complexes in the Channeled Scablands of Eastern Washington: New Approaches to Evaluating Cultural Landscapes. Master's Thesis, Master of Environmental Studies, The Evergreen State College, Olympia, Washington.
2014a State of Washington Archaeological Inventory Form (45KT215). Manuscript on file, Washington Department of Archaeology and Historic Preservation, Olympia.
2014b State of Washington Archaeological Inventory Form (45KT3731). Manuscript on file, Washington Department of Archaeology and Historic Preservation, Olympia.
2014c State of Washington Archaeological Inventory Form (45KT3732). Manuscript on file, Washington Department of Archaeology and Historic Preservation, Olympia.
2014d State of Washington Archaeological Inventory Form (45KT3733). Manuscript on file, Washington Department of Archaeology and Historic Preservation, Olympia.
2014e State of Washington Archaeological Inventory Form (45KT3734). Manuscript on file, Washington Department of Archaeology and Historic Preservation, Olympia.

Klein, Richard G, Cornelia Wolf, Leslie G. Freeman, and Kathryn Allwarden
1981 *Journal of Archaeological Science* 8:1-31.

Lohse, E. S.
1985 Rufus Woods Lake Projectile Point Chronology. In Summary of Results, Chief Joseph Dam Cultural Resources Project, Washington, edited by S. K. Campbell, pp. 317-364. Office of Public Archaeology, University of Washington. Submitted to U.S. Army Corps of Engineers, Seattle, Washington.

Lonetree, Amy
2012 *Decolonizing Museums: Representing Native America in National and Tribal Museums*. The University of North Carolina Press, Chapel Hill.

Lubinski, Patrick M.
2019 Zooarchaeology Primer: A Reader for Anth. 426, 10th edition. Central Washington University Custom Publishing Department, Ellensburg.

Lubinski, Patrick M., and Greg C. Burtchard
2005 Fryingpan Rockshelter (45PI143): A Subalpine Fauna in Mount Rainier National Park. *Archaeology in Washington* 11:35-52.

Lyman, R. Lee
1995 Zooarchaeology of the Moses Coulee Cave (45-DO-331) Spoils Pile. *Northwest Anthropological Research Notes* 29(2):141-176.
1996 Applied Zooarchaeology: The Relevance of Faunal Analysis to Wildlife Management. *World Archaeology* 21(1):110-125.
2008 The Holocene History of Bighorn Sheep (*Ovis Canadensis*) in Eastern Washington State, Northwestern USA. *The Holocene* 19(1):143-150.
2010 What Taphonomy Is, What it Isn't, and Why Taphonomists Should Care About the Difference. *Journal of Taphonomy* 8(1):1-16.
2017 Wear Stages and Crown Heights in Prehistoric Bighorn Sheep (*Ovis canadensis*) Lower Molars in Eastern Washington State, U.S.A. *Journal of Archaeological Science: Reports* 15:40-47.
2019 Assumptions and Protocol of the Taxonomic Identification of Faunal Remains in Zooarchaeology: a North American Perspective. *Journal of Archaeological Method and* Theory pp. 1-63.

McClure, Richard H., Jr.
1979 State of Washington Archaeological Inventory Form (45DO331). Manuscript on file, Washington Department of Archaeology and Historic Preservation, Olympia.

McCutcheon, Patrick T.
1997 Archaeological Investigations of Stone Tool Heat-Treatment Technology in Southeastern Missouri: An Experimental Approach. Unpublished Ph.D. dissertation, Department of Anthropology, University of Washington, Seattle.

MacFarland, Kathryn, and Arthur W. Vokes
2016 Dusting off the Data: Curating and Rehabilitating Archaeological Legacy and Orphaned Collections. *Advances in Archaeological Practice* 4(2):161–175.

McGimsey III, Charles R.
1971 Archaeology and the Law. *American Antiquity* 36(2):125-126.

McKenny, Pamela, and Stephen Emerson
2007 A Cultural Resources Survey of the Colockum-Quilomene Closure Project, Kittitas County, Washington. Short Report 934. Archaeological and Historical Services, Eastern Washington University, Cheney.

Majewski, Teresita
2019 Best Practices for Collections Management Planning. In *Using and Curating Archaeological Collections*, edited by S. Terry Childs and Mark S. Warner, pp.67-77. Society for American Archaeology, Washington DC.

Marino, Eugene A.
2004 Back from the Brink-Renewing Research Potential. In *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship*, edited by S. Terry Childs, pp. 43-51. Society for American Archaeology, Washington, DC.

Marquardt, William H.
2004 Epilogue: A Personal Perspective on Archaeological Curation in the USA. In *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship*, edited by S. Terry Childs, pp. 169-174. Society for American Archaeology, Washington, D.C.

Marquardt, William H., Anta Montet-White, and Sandra C. Scholtz
1982 Resolving the Crisis in Archaeological Collections Curation. *American Antiquity* 47(2):409-418.

Mass, Bruce W. and Linda M. Gregonis
1996 The Art, Science, and Ethics of Avocational Archaeology. *Journal of the Southwest* 38(3):367-383.

Mehringer, P. J., and F. F. Foit, Jr.
1990 Volcanic Ash Dating of the Clovis Cache at East Wenatchee. *National Geographic Research* 6(4):495-503.

Miller, Jay
1998 Middle Columbia River Salishans. In *Plateau,* edited by William C. Sturtevant, pp. 253-270. Handbook of North American Indians, Vol. 12, Smithsonian Institution, Washington DC.

Mukurtu
2020 Mukurtu homepage. Electronic document, https://mukurtu.org/, accessed April 24, 2020.

Murie, Olaus J.
1951 *The Elk of North America*. Stackpole Books, Harrisburg, Pennsylvania.

National Park Service (NPS)
2016a *NPS Museum Handbook, Part I: Museum Collections*. Museum Management Program, Washington, DC.
2016b *NPS Museum Handbook, Part II: Museum Records*. Museum Management Program, Washington, DC.
2016c *NPS Museum Handbook, Part III: Museum Collections Use*. Museum Management Program, Washington, DC.

Neller, Angela J.
2004 The Future is in the Past: Native American Issues in Archaeological Collections Care and Management. In *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship*, edited by S. Terry Childs, pp. 137-145. Society for American Archaeology, Washington, DC.
2019 Tribal Voices on Archaeological Collections. In *Curating and Using Archaeological Collections*, edited by Mark S. Warner and S. Terry Childs, pp. 15-37. Society for American Archaeology, Washington DC.

Nickerson, Gifford S.
1972 The Implications of a Self-Fulfilling Prophecy in American Archaeology. *American Antiquity* 37(4):551-553.

Nickolas, George, and Nola Markey
2015 Traditional Knowledge, Archaeological Evidence and Other Ways of Knowing. In *Material Evidence* edited by Robert Chapman and Alison Wylie, pp. 287-307. Routledge, New York.

Nora, Pierre
1989 Between Memory and History: Les Lieux de Mémoire. *Representations* 26 Special Issue Memory and Counter-Memory:7-24.

Nordstrand, Pollyanna
2004 The Voice of the Museum: Developing Displays. In *Caring for American Indian Objects A Practical and Cultural Guide*, edited by Sherelyn Odgen, pp.11-14. Minnesota Historical Society, St. Paul.

Nyers, Alex
2020 *X-Ray Fluorescence Analysis of an Obsidian Artifact from Tekison Cave (45-KT-215), Kittitas County, Washington*. Northwest Research Obsidian Studies Laboratory. Submitted to CWU Department of Anthropology and Museum Studies, Report 2020-04.

Olson, Heather L., and Danielle R. Cathcart
2019 Orphans on the Shelf (and in the Attic). In *Curating and Using Archaeological Collections*, edited by Mark S. Warner and S. Terry Childs, pp. 15-37. Society for American Archaeology, Washington, DC.

Onciul, Byrony
2015 *Museums, Heritage, and Indigenous Voice: Decolonizing Engagement*. Routledge, New York.

Parfitt, Anne B., and Patrick T. McCutcheon
2017 Chemical Sourcing of Obsidian Artifacts from the Grisson Site (45-KT-301) to Study Source Variability. *Journal of Northwest Anthropology* 51(1):37-72.

Payne, Sebastian
1975 Partial Recovery and Sample Bias. In *Archaeozoological Studies*, edited by A.T. Clason, pp. 7-17. American Elsevier, New York.
1987 Reference Codes for Wear States in the Mandibular Cheek Teeth of Sheep and Goats. *Journal of Archaeological Science* 14:609-614.

Philips, Laura S.
2004 Adaptive Reuse: Incorporating Public Education into the Curation Process. In *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship*, edited by S. Terry Childs, pp. 137-145. Society for American Archaeology, Washington, DC.

Pitblado, Bonnie
2014 An Argument for Ethical, Proactive, Archaeologist-artifact Collector Collaboration. *American Antiquity* 79(3):385-400.

Pitblado, Bonnie, Michael J. Shott, Scott Brosowske, Virginia L. Butler, Jim Cox, Chris Espenshade, Angela J. Neller, Giovanna M. Peebles, Guadalupe Sanchez, Richard Shipley, Rafael Suarez, and Suzie Thomas
2018 Process and Outcomes of the SAA "Professional Archaeologists, Avocational Archaeologists, and Responsible Artifact Collectors Relationships Task Force" (2015-2018). *The SAA Archaeological Record* November 2018:14-17.

Ray, Verne
1936 *Native Villages and Groupings of the Columbia Basin*. University of Washington, Seattle.
1963 *Primitive Pragmatists: The Modoc Indians of Northern California.* University of Washington, Seattle.

Reichhardt, Tony
2007 The Difficulties of Deaccessioning. *American Archaeology* 11(1):32-37.

Reimer Paula J., Edouard Bard, Alex Bayliss, J. Warren Beck, Paul G. Blackwell, Christopher Bronk Ramsey, Caitlin E. Buck, Hai Cheng, R. Lawrence Edwards, Michael Friedrich, Pieter M. Grootes, Thomas P. Guilderson, Haflida Haflidason, Irka Hajdas, Christine Hatté, Timothy J. Heaton, Dirk L. Hoffman, Alan G. Hogg, Konrad A. Hughen, K. Felix Kaiser, Bernd Kromer, Sturt W. Manning, Mu Niu, Ron W. Reimer, David A. Richards, E. Marian Scott, John R. Southon, Richard A. Staff, Christian S. M. Turney, and Johannes van der Plicht.
2013. IntCal13 and Marine13 radiocarbon age calibration curves 0-50,000 years cal BP. Radiocarbon 55(4): 1869-1887.

Reitz, and Wing
1999 *Zooarchaeology*. Cambridge Manual in Archaeology, Cambridge University Press, England.

Ripin, Jeremy W.
2017 Talus Features of the Middle Columbia River: Typological and Locational Analyses. Master's Thesis, Individual Studies, Central Washington University, Ellensburg, Washington.

Rosoff, Nancy B.
2003 Integrating Native Views into Museum Procedures: Hope and Practice at the National Museum of the American Indian. In *Museums and Source Communities: A Routledge Reader*, edited by Laura Peers and Alison K. Brown, pp.72-79. Routledge, London.

Roth, Kate
2016 With an Open Mind and Open Heart: Collections Care at the Laboratory of Archaeology. *Museum Worlds: Advances in Research* 4(1):111-125.

Rousseau, Mike K.
2004 A Culture Historic Synthesis and Changes in Human Mobility, Sedentism, Subsistence, Settlement, and Population on the Canadian Plateau, 7000-200 BP. In *Complex Hunter-Gatherers*, edited by William C. Prentiss and Ian Kuijt, pp. 3-22, The University of Utah Press, Salt Lake City.

Ruby, Robert H., and John A. Brown
1995 *Half-Sun on the Columbia: A Biography of Chief Moses*. University of Oklahoma Press, Norman Oklahoma.

Schuster, Helen H.
1998 Yakima and Neighboring Groups. In *Plateau*, edited by William C. Sturtevant, pp. 327-351, Handbook of North American Indians, Vol. 12, Smithsonian Institution, Washington, DC.

Sharpe, Jim
1994 Inventory of Archaeological Materials in Storage at the Old Hospital.

Shea, Holly Ann Cecilia
2012 The Grissom Site (45KT301): A Review and Synthesis of Investigations and Exploration of the Site's Research Potential. Master's Thesis, Resource Management Program, Central Washington University, Ellensburg, Washington.

Simmons, John E.
2006 *Things Great and Small: Collections Management Policies*. American Association of Museums, Washington, DC.

Sleeper-Smith, Susan
2007 *Contesting Knowledge: Museums and Indigenous Perspectives*. University of Nebraska Press, Lincoln.

Smith, Harlan
1910 *The Archaeology of Yakima Valley*. Anthropological Papers of the American Museum of Natural History VI. American Museum of Natural History, New York.

Smith, William C., and Jeane Welch
1976 National Register of Historic Places Inventory Nomination Form: Tekison Cave 45KT215. Manuscript of file, Washington Department of Archaeology and Historic Preservation, Olympia.
1977 Archaeological Explorations in the Columbia Basin: A Report on the Mesa Project 1973-1975. CWAS, Department of Anthropology, CWSC, Ellensburg, Wa.

Smithsonian Institution
2012 National Museum of Natural History Collections Management Policy. Electronic document, https://naturalhistory.si.edu/sites/default/files/media/file/nmnh-collections-management-policy-12-13-2017-final.pdf, accessed February 1, 2020
2020 Recovering Voices. Electronic document, https://naturalhistory.si.edu/research/anthropology/programs/recovering-voices, accessed April 25, 2020.

Society for American Archaeology
1996 Principles of Archaeological Ethics. *American Antiquity* 61(3):451-452

2018 SAA Statement on Collaboration with Responsible and Responsive Stewards of the Past. Electronic document, https://www.saa.org/quick-nav/saa-media-room/news-article/2018/08/01/statement-on-collaboration-with-responsible-and-responsive-stewards-of-the-past, accessed April 25, 2020.

Speller, C.F., B. Kooyman, A.T. Rodrigues, E.G. Langemann, R.M. Jobin, and D.Y. Yang
2014 Assessing Prehistoric Genetic Structure and Diversity of North American Elk (Cervus elaphus) Populations in Alberta, Canada. Canadian Journal of Zooarchaeology 92(4):285-298.

Steele, Teresa E. and Timothy D. Weaver
2012 Refining the Quadratic Crown Height Method of Age Estimation: Do Elk Teeth Wear Quadratically with Age? *Journal of Archaeological Science* 39:2329-2334.

Stiner, Mary C.
1989 The Use of Mortality Patterns in Archaeological Studies of Hominid Predatory Adaption. *Journal of Anthropological Archaeology* 9:305-351.

Sullivan, Lynne P., Bobby R. Braly, Michaelyn S. Harle, and Shannon D. Koerner
2008 Remembering New Deal Archaeology in the Southeast: A Legacy in Museum Collections. In *Museums and Memory*, edited by Robert Shanafelt, pp. 65-108. Newfound Press, Knoxville.

Sullivan, Lynne P., and S. Terry Childs
2003 *Curating Archaeological Collections: From Field to Repository*. AltaMira, New York.

Swain, Hedley
2007 *An Introduction to Museum Archaeology*. Cambridge University Press, New York.

Swan, Daniel C., and Michael Paul Jordan
2015 Contingent Collaborations: Patterns of Reciprocity in Museum-Community Partnerships. *Journal of Folklore Research* 52(1):39-84.

Teit, James H.
1928 *The Middle Columbia Salish,* edited by Franz Boaz. University of Washington Press, Seattle.

Todd, Lawrence C., David J. Rapson, and Jack L. Hofman
1996 Dentition Studies of the Mill Iron and Other Early Paleoindian Bison Bonebed Sites. In *The Mill Iron Site*, edited by George C. Frison, pp.145-175.University of New Mexico Press, Albuquerque.

University of Texas at Austin
2018 Collections Management Policy. Electronic document, https://liberalarts.utexas.edu/tarl/collections/collections.php, accessed January 31, 2019.

Voss, Barbara
2012 Curation as Research: A Case Study in Orphaned and Underreported Archaeological Collections. *Archaeological Dialogue*s 19(2):145-169.

Walker, Deward E. Jr.
1998 Introduction. In *Plateau*, edited by William C. Sturtevant, pp. 525-545, Handbook of North American Indians, Vol. 12, Smithsonian Institution, Washington, DC.

Washington Department of Fish and Wildlife (WDFW)
2018 Colockum Wildlife Area. Electronic document, https://wdfw.wa.gov/lands/wildlife_areas/colockum/, accessed January 31, 2019.
2007 Tribal Ceded Areas in Washington State. Electronic document, https://wdfw.wa.gov/hunting/tribal/wa_tribal_ceeded_lands.pdf, accessed January 31, 2019.
2006 Colockum Wildlife Area Management Plan. Wildlife Management Program, Washington Department of Fish and Wildlife, Olympia. 83 pp.

Washington State University
n.d. Using Archaeological Collections. Electronic document, https://archaeology.wsu.edu/archaeological-repository/using-collections/, accessed February 4 2019.

Watkins, Joe
2000 *Indigenous Archaeology: American Indian Values and Scientific Practice*. Alta Mira Press, Walnut Creek.

White, Theodore E.
1953 A Method of Calculating the Dietary Percentage of Various Food Animals Utilized by Aboriginal Peoples. *American Antiquity* 18(4):396-398.

Wydoski, Richard S., and Richard R. Whitney
2003 *Inland Fishes of Washington*. 2nd ed. American Fisheries Society, Bethesda, Maryland.

Yakama Nation
2000 Ceded Area and Reservation Boundary of the Confederated Tribes and Bands of the Yakama Nation. Electronic document, http://www.yakamanationnsn.gov/docs/CededMap0001.pdf, accessed May 12, 2019.

Zawadski, Krista Ulujuk
2018 Lines of Discovery on Inuit Needle Cases, Kakpiit, in Museum Collections. *Museum Anthropology* 41:61-75.

Zimmerman, Larry
2008 Real People or Reconstructed People? Ethnocritical Archaeology, Ethnography, and Community. In *Ethnographic Archaeologies: Reflections on Stakeholders and Archaeological Practices*, edited by Quetzil E Castaneda and Christopher N. Mathews, pp. 183-204. AltaMira, New York.

Appendix A: Tribe Interview Guide

Semi-structured Interviews are conversations that are organized around themes. The themes for this research are "The Tekison Cave Site," "Avocational Excavations," and "Collection Access Recommendations." Below are examples of general questions and more specific questions that may arise.

Theme: The Tekison Cave Site

General Question	Specific Questions
What can you share with me about the Tekison Cave Site?	What do you know about the site?
	.How is the site important to indigenous people?
	Are there any oral histories of the site?
	If you have been to the site, what memories or feelings do you have about your visit(s)?

Theme: Avocational Excavations

General Question	Specific Questions
What can you share with me about the excavation of Tekison Cave that occurred in the early 1970s?	How do you feel about the general public collecting precontact artifacts?
	What would you like to see happen with artifacts that were recovered by avocational archaeologists?

Theme: Access Recommendations

General Question	Specific Questions
What do you think access should look like for this collection (which includes precontact artifacts and documents of site excavation)	What artifacts would be suitable for display to the general public
	What are appropriate avenues to make artifacts accessible (digital photo and/or record, or exhibit)?
	What are appropriate ways of using images of artifacts and the site? What are inappropriate ways?
	Are there any recommended handling or display limitations for any artifacts in this collection?
	Are there any recommended ways artifacts should or should not be used for research?

Appendix B: Catalog Slip

Cat#: _____

Site: **Tekison Cave (45KT215)**

Grid #/Letter _____

Depth(s) _____

Material/Count _____

Excavator/date _____

Cataloger/date _____

Other: _____

_____

Tekison Cave (45KT215) Catalog Form **Cataloguer: _____** **Date page start: _____ Page#: _____of _____.**

Cat#	Grid # and Letter	Depth(s)	Material	Count	Excavator	Excavation Date	Cataloguer	Catalog Date	CWAS Bag #	Comments

More comments (key to cat # here):

Entered in database: Date & Name _____

Form modified 29 January 2019

Appendix D: Avocational Archaeologist Interview Guide

Semi-structured Interviews are conversations that are organized around themes. The themes for this research are "The Tekison Cave Site," "Avocational Excavations," and "Collection Access Recommendations." Below are examples of general questions and more specific questions that may arise.

Theme: The Tekison Cave Site

General Question	Specific Questions
What can you share with me about the Tekison Cave Site?	What do you know about the site?
	How did you find out about the site?
	What memories or feelings do you have about your visit(s)?
	How is the site important to you?

Theme: Avocational Excavations

General Question	Specific Questions
What can you share with me about the excavation of Tekison Cave that occurred in the early 1970s?	What made you decide to excavate the site?
	Can you explain what "2 Springs" means?
	Do you want to elaborate on anything in the field notes held at CWU?

Theme: Access Recommendations

General Question	Specific Questions
What do you think access should look like for this collection (which includes precontact artifacts and documents of site excavation)	To what extent would you like your family's story and involvement in the excavation known?
	Do you prefer to remain anonymous or known?
	What would you like to see happen with the Tekison collection that is at CWU?
	Do you know of or have more artifacts *from the site* not held by CWU?

Appendix E: 1970s Artifact Catalog and Current Possession

This catalog is modified from the appendix to *Excavation at Tekison Rockshelter* (Johnson 1972-1975), which includes catalog number, class, a brief description, provenience and excavator. Excavator has not been listed at the request of Tom Johnson [Pseudonym]. The possession in 2019 column was added. Avocational-held refers to objects loaned to CWU by Tom Johnson in 2019, CWU-held refers to objects held by the Department of Anthropology and Museum Studies before this research began.

Cat#	Possession in 2019	Class	Brief Description	Grid #	Grid letter	Depth (in)
TC1-1	Unknown	lithic	scraper			12.1-24
TC1-2	Unknown	lithic	projectile point			12.1-24
TC1-3	Unknown	lithic	projectile point			12.1-24
TC1-4	Unknown	lithic	projectile point			12.1-24
TC1-5	Unknown	lithic	projectile point			12.1-24
TC1-6	Unknown	lithic	projectile point			12.1-24
TC1-7	Unknown	lithic	projectile point			12.1-24
TC1-8	Avocational-held	bone	needle			12.1-24
TC1-9	Avocational-held	plant fiber	cordage			12.1-24
TC1-10	Avocational-held	animal fiber	buckskin			12.1-24
TC1-11	Avocational-held	animal fiber	buckskin			12.1-24
TC1-12	Avocational-held	plant fiber	cordage			12.1-24
TC1-13	Avocational-held	animal fiber	buckskin			12.1-24
TC1-14	Avocational-held	plant fiber	cordage			12.1-24
TC1-15	Avocational-held	plant fiber	basket handle fragment			12.1-24
TC1-16	Unknown	lithic	projectile point	17	D	unknown
TC1-17	Unknown	lithic	projectile point	17	D	unknown
TC1-18	Unknown	lithic	projectile point	21	C	27
TC1-19	Unknown	lithic	scraper	16	A	23
TC1-20	Unknown	lithic	projectile point	16	D	unknown
TC1-21	Unknown	lithic	projectile point	20	B	41
TC1-22	Unknown	lithic	projectile point	17	E	24 1/2
TC1-23	Unknown	lithic	projectile point	17	E	24 1/2
TC1-24	Unknown	lithic	knife	16	D	unknown
TC1-25	Unknown	lithic	projectile point			12.1-24
TC1-26	Unknown	lithic	projectile point			12.1-24

Cat#	Possession in 2019	Class	Brief Description	Grid #	Grid letter	Depth (in)
TC1-27	Unknown	lithic	projectile point			12.1-24
TC1-28	Unknown	lithic	projectile point			12.1-24
TC1-29	Unknown	lithic	projectile point	22	F	unknown
TC1-30	Unknown	plant fiber	basket handle fragment	7	F	unknown
TC1-31	Avocational-held	plant fiber	cordage, total until 1972			unknown
TC1-32	Avocational-held	animal fiber	animal fiber, total until 1972	22	G	19.4
TC1-33	Avocational-held	bone	antler	16	A	27
TC1-34	Avocational-held	bone	wedge	16	A	27
TC1-35	Unknown	bone	wedge	16	A	27
TC1-36	Unknown	lithic	projectile point	18	D	12.1-24
TC1-37	Unknown	lithic	projectile point	18	D	12.1-24
TC1-38	Unknown	lithic	projectile point	18	D	12.1-24
TC1-39	Unknown	lithic	projectile point	18	D	12.1-24
TC1-40	Unknown	lithic	projectile point	18	D	12.1-24
TC1-41	Unknown	lithic	projectile point	18	D	12.1-24
TC1-42	Unknown	lithic	projectile point	18	D	12.1-24
TC1-43	Unknown	lithic	projectile point	18	D	12.1-24
TC1-44	Wanapum Heritage Center	plant fiber	"z" basket	18	D	24-28
TC1-45	Unknown	lithic	projectile point	18	D	12.1-24
TC1-46	Unknown	lithic	projectile point	18	D	12.1-24
TC1-47	Unknown	lithic	projectile point	18	D	12.1-24
TC1-48	Unknown	lithic	projectile point	18	D	12.1-24
TC1-49	Unknown	lithic	projectile point	18	D	12.1-24
TC1-50	Unknown	lithic	projectile point	18	D	12.1-24
TC1-51	Unknown	lithic	projectile point	18	D	12.1-24
TC1-52	Unknown	lithic	projectile point	18	D	12.1-24
TC1-52	Unknown	lithic	projectile point	18	D	12.1-24
TC1-53	Unknown	lithic	projectile point	18	D	12.1-24
TC1-54	Unknown	glass	bead	18	D	surface
TC1-55	Unknown	lithic	projectile point	20	A	12.1-24
TC1-56	Unknown	lithic	projectile point	20	A	12.1-24
TC1-57	Unknown	lithic	projectile point	20	A	12.1-24

Cat#	Possession in 2019	Class	Brief Description	Grid #	Grid letter	Depth (in)
TC1-58	Unknown	lithic	projectile point	20	A	12.1-24
TC1-59	Unknown	lithic	projectile point	20	A	12.1-24
TC1-60	Unknown	lithic	pipe	20	A	20
TC1-61	Unknown	lithic	projectile point	23	E	25
TC1-62	Unknown	lithic	projectile point	23	E	28
TC1-63	Unknown	lithic	projectile point	23	E	28
TC1-64	Unknown	lithic	projectile point	23	E	28.5
TC1-65	Unknown	lithic	projectile point	23	E	28.5
TC1-66	Unknown	plant fiber	cordage	22	E	28
TC1-67	Avocational-held	animal fiber	buckskin	25	D	31.6
TC1-68	Unknown	plant fiber	cordage	25	E	36
TC1-69	Unknown	lithic	projectile point	22	D	26.25
TC1-70	Unknown	lithic	knife	22	D	24
TC1-71	Avocational-held	animal fiber	buckskin	26	D	41
TC1-72	Unknown	lithic	projectile point	26	E	41
TC1-73	Avocational-held	plant fiber	cordage	26	D	41
TC1-74	Avocational-held	bone	sheep horns	22	F	32
TC1-75	Unknown	shell	abalone ornament	22	D	12.1-24
TC1-76	Unknown	shell	dentalium	22	C	12.1-24
TC1-77	Unknown	lithic	projectile point			unknown
TC1-78	Unknown	lithic	projectile point			unknown
TC1-79	Unknown	animal fiber	buckskin	22	E	28
TC1-80	Unknown	lithic	chipped stone			12.1-24
TC1-81	Unknown	lithic	chipped stone			12.1-24
TC1-82	Unknown	lithic	chipped stone			12.1-24
TC1-83	Unknown	lithic	projectile point			12.1-24
TC1-84	Unknown	lithic	projectile point			12.1-24
TC1-85	Unknown	lithic	projectile point			12.1-24
TC1-86	Unknown	lithic	projectile point			12.1-24
TC1-87	Unknown	lithic	projectile point			12.1-24
TC1-88	Unknown	lithic	projectile point			12.1-24
TC1-89	Unknown	lithic	projectile point			12.1-24
TC1-90	Unknown	bone	carved bone			12.1-24

Cat#	Possession in 2019	Class	Brief Description	Grid #	Grid letter	Depth (in)
TC1-91	Unknown	lithic	projectile point			12.1-24
TC1-92	Unknown	lithic	projectile point			12.1-24
TC1-93	Unknown	lithic	knife			6.1-18
TC1-94	Unknown	lithic	projectile point			18
TC1-95	Unknown	lithic	projectile point			unknown
TC1-96	Unknown	lithic	projectile point			unknown
TC1-97	Unknown	lithic	projectile point			6.1-18
TC1-98	Unknown	lithic	projectile point			6.1-18
TC1-99	Unknown	lithic	projectile point			6.1-18
TC1-100	Unknown	lithic	projectile point			6.1-18
TC1-101	Unknown	lithic	projectile point			6.1-18
TC1-102	Unknown	lithic	pipe	10	E	24.5
TC1-103	Unknown	lithic	projectile point			6.1-18
TC1-104	Unknown	lithic	projectile point			6.1-18
TC1-105	Unknown	bone	wedge	10	E	6.1-18
TC1-106	Unknown	lithic	projectile point			unknown
TC1-107	Unknown	lithic	projectile point			unknown
TC1-108	Unknown	shell	dentalium	17	E	24
TC1-109	Unknown	lithic	projectile point	16	B	23
TC1-110	Unknown	lithic	projectile point			6.1-18
TC1-111	Unknown	bone	needle	13	G	24
TC1-112	Unknown	lithic	projectile point	13	G	24
TC1-113	Avocational-held	bone	sheep horns	13	G	14
TC1-114	Avocational-held	plant fiber	cordage	17	G	13
TC1-115	Avocational-held	plant fiber	cordage	17	G	13
TC1-116	Avocational-held	plant fiber	cordage	17	G	13
TC1-117	Unknown	plant fiber	cordage			unknown
TC1-118	Avocational-held	animal fiber	buckskin	14	F	19-25
TC1-119	CWU-held	bone	jawbone	9	I	surface
TC1-120	Unknown	lithic	projectile point	12	C	25
TC1-121	Avocational-held	animal fiber	buckskin	14	F	19-25
TC1-122	Unknown	lithic	knife	17	C	15
TC1-123	Unknown	lithic		17	C	15

Cat#	Possession in 2019	Class	Brief Description	Grid #	Grid letter	Depth (in)
TC1-124	Avocational-held	plant fiber	cordage	7	E	29
TC1-125	Unknown	plant fiber	cordage	14	F	19.5
TC1-126	Avocational-held	plant fiber	cordage	7	E	25-30
TC1-127	Avocational-held	plant fiber	cordage	10	F	26.5
TC1-128	Avocational-held	plant fiber	cordage	10	F	24
TC1-129	Avocational-held	plant fiber	cordage	13	F	15.5
TC1-130	Avocational-held	plant fiber	cordage	22	D	27
TC1-131	Avocational-held	plant fiber	cordage	10	F	24
TC1-132	Unknown	plant fiber	cordage			unknown
TC1-133	Avocational-held	plant fiber	cordage	11	F	26
TC1-134	Avocational-held	plant fiber	cordage	22	D	26
TC1-135	Avocational-held	animal fiber	buckskin	13	G	unknown
TC1-136	Avocational-held	plant fiber	cordage, total until 1972			unknown
TC1-137	Unknown	lithic	projectile point	12	C	unknown
TC1-138	Avocational-held	plant fiber	cordage, total until 1972			unknown
TC1-139	Unknown	plant fiber	bulb			unknown
TC1-140	Unknown	lithic	projectile point			12.1-24
TC1-141	Avocational-held	bone	sheep horns	10	F	30
TC1-142	Avocational-held	plant fiber	cordage, total until 1972			unknown
TC1-143	Avocational-held	animal fiber	buckskin, total until 1972			unknown
TC1-144	Unknown	wood		16	B	23.5
TC1-145	Avocational-held	wood		17	B/C	25-29
TC1-146	Avocational-held	plant fiber	cordage	18	B	38
TC1-147	Unknown	plant fiber	cordage	18	B	38
TC1-148	Unknown	animal fiber	wool	13	G	21.5
TC1-149	Avocational and CWU-held	plant fiber	matting	19	C	38
TC1-150	Avocational-held	plant fiber	cordage	19	C	39
TC1-151	Unknown	wood	arrow shaft	12	G	11
TC1-152	Unknown	lithic	projectile point	11	G	22-26
TC1-153	Unknown	lithic	projectile point	13	F	25.5-35.5
TC1-154	Unknown	lithic	projectile point	13	F	25.5-35.5
TC1-155	Unknown	lithic	projectile point	14	F	25.5-27.5

Cat#	Possession in 2019	Class	Brief Description	Grid #	Grid letter	Depth (in)
TC1-156	Avocational-held	bone	sheep horns	11	F	20.5
TC1-157	Unknown	bone	wedge	18	C	33.5
TC1-158	Unknown	plant fiber	cordage	19	C	33
TC1-159	Unknown	plant fiber	cordage	17	C	25-28.5
TC1-160	Unknown	lithic		11	E	28
TC1-161	Avocational-held	plant fiber	cordage	19	C	33
TC1-162	Avocational-held	plant fiber	cordage	18	C	27.5-32
TC1-163	Avocational-held	plant fiber	cordage	18	C	27.5-32.5
TC1-164	Unknown	plant fiber	cordage	7	G	surface
TC1-165	Avocational and CWU-held	plant fiber	cordage	18	B	32
TC1-166	Avocational-held	plant fiber	knot	11	H	8.5-14
TC1-167	Avocational-held	animal fiber	animal fiber, total until 1972			
TC1-168	Unknown	animal fiber	animal fiber, total until 1972			
TC1-169	Unknown	bone	bone, total until 1972			
TC1-170	Unknown	glass	glass, total until 1972			
TC1-171	Unknown	plant fiber	cordage, total until 1972			
TC1-172	Unknown	plant fiber	plant fiber, total until 1972			
TC1-173	Unknown	lithic	lithic artifacts, total until 1972			
TC1-174	Unknown	plant fiber	cordage, total until 1972			
TC1-175	Unknown	glass	blue bead	14	F	20
TC1-176	Unknown	animal fiber	buckskin	22	E	28
TC1-177	Unknown	plant fiber	cordage	22	D	29
TC1-178	Unknown	plant fiber	cordage	22	D	32
TC1-179	Unknown	bone		13	G	19-24
TC1-180	Unknown	plant fiber	cordage	23	C	27
TC1-181	Avocational-held	plant fiber				
TC1-182	CWU-held	bone		6	H	58-59
TC1-183	CWU-held	bone		7	H	63
TC1-184	CWU-held	bone		6	G	59-60
TC1-185	Unknown	bone		6	G	61.5

Cat#	Possession in 2019	Class	Brief Description	Grid #	Grid letter	Depth (in)
TC1-186	Unknown	lithic		15	G	19
TC1-187	Unknown	lithic		10	F	unknown
TC1-188	Unknown	lithic	artifacts framed in "jade frame"			unknown
TC1-199	Unknown	lithic		19	D	36-43
TC1-200	Unknown	lithic		19	D	28
TC1-201	Unknown	lithic		19	D	28
TC1-202	Unknown	lithic		18	C	29-34
TC1-203	Unknown	lithic	projectile point	18	C'	44.5
TC1-204	Avocational-held	animal fiber		18	C	48
TC1-205	Avocational-held	plant fiber		19	D	43-52
TC1-206	Avocational-held	plant fiber		19	D	38
TC1-207	Avocational-held	plant fiber		18	C	38
TC1-208	CWU-held	shell		19	C	39-46
TC1-209	CWU-held	shell		19	C	39-45
TC1-210	CWU-held	shell		15	D	38
TC1-211	CWU-held	shell		20	B	41
TC1-212	CWU-held	shell		18	C	
TC1-213	CWU-held	shell		22	D	24
TC1-214	CWU-held	shell		22/23	D	33-35
TC1-215	CWU-held	shell		14	G	21
TC1-216	CWU-held	shell		18	B	27-31
TC1-217	CWU-held	shell		10	F	36
TC1-218	CWU-held	shell		22	B	
TC1-219	CWU-held	shell		20	B	36

Appendix F: CWU-held Associated Records Finding Aid

Tekison Cave 45KT215 Associated Records: Photographic Prints
Physical Location: Box 61, Binder 1, (continued)
Electronic Location: Tekison Associated Records\Tekison Cave scanned photos and negatives\Scanned photos\ (continued)
Names of excavators have been redacted at the request of Tom Johnson [pseudonym].

Photo/File Name	Physical Location Continued	Electronic Location Continued	Description
A Frame 4 8x10 has been made	Sheet 1	A Frame	5 x 3.5", B/W, includes negative.
A Frame 17 Profile 2 1971	Sheet 1	A Frame	5 x 3.5", B/W, includes negative.
B Frame 1 Pipe in Foreground is West End of E-W Wire. 6-18-72	Sheet 2	B Frame	5 x 3.5", B/W, includes negative.
B Frame 3 July 22-23, 1972	Sheet 2	B Frame	5 x 3.5", B/W, includes negative.
B Frame 4 July 22-23, 1972	Sheet 2	B Frame	5 x 3.5", B/W, includes negative.
B Frame 5 11B 12B [redacted]Dug June 17-18, 1972 11C 12C Surface level is 8 to 20	Sheet 2	B Frame	5 x 3.5", B/W, includes negative.
B Frame 7 11B 12B June 17-18, 1972 Surface level 8. 11C 12C [redacted] Dug surface level 20	Sheet 3	B Frame	5 x 3.5", B/W, includes negative.
B Frame 10 Looking South from Level (E Line) 6-18-72	Sheet 3	B Frame	5 x 3.5", B/W, includes negative.
B Frame 12 Excavation Done by [redacted], Taken of Cordage Found in 18C	Sheet 3	B Frame	5 x 3.5", B/W, includes negative.
B Frame 13 Excavation Done by [redacted] Matting Fragment 7-72 18B, 38 TC1-146	Sheet 3	B Frame	5 x 3.5", B/W, includes negative.
B Frame 15 Excavation Done by [redacted] 7-72	Sheet 4	B Frame	5 x 3.5", B/W, includes negative.
B Frame 17 Deep Pit is 19C, 19B in Background 7-4-72	Sheet 4	B Frame	5 x 3.5", color, includes slide.
B Frame 18 7-4-72 18B, 19B. 19B is Unexcavated Except for Top 8. 18C 19C	Sheet 4	B Frame	5 x 3.5", color, includes slide.
B Frame 21 7-4-72 Looking South From 6F-G	Sheet 4	B Frame	5 x 3.5", color, includes slide.
B Frame 22 Excavation Done by [redacted] 7-72	Sheet 5	B Frame	5 x 3.5", B/W, includes negative.
C Frame 2 Position of Screen at Mouth of TC1 (before resifting was done) 8-72	Sheet 5	C Frame	5 x 3.5", B/W, includes negative.
C Frame 3 Portion of screen at mouth of TC1 (before resifting was done) (8-72)	Sheet 5	C Frame	5 x 3.5", B/W, includes negative.
C Frame 4 Central Station of TC1 (8-72)	Sheet 5	C Frame	5 x 3.5", B/W, includes negative.

Photo/File Name	Physical Location Continued	Electronic Location Continued	Description
C Frame 5 Central Station of TC1 (8-72)	Sheet 6	N/A	5 x 3.5", B/W, includes negative. Duplicate of C Frame 4
C Frame 6 Central Station of TC1 (8-72)	Sheet 6	N/A	5 x 3.5", B/W, includes negative. Duplicate of C Frame 4
C Frame 7 Position of Screen at Mouth of TC1 (before resifting was done) (8-72)	Sheet 6	C Frame	5 x 3.5", B/W, includes negative.
C Frame 8 Position of Screen at Mouth of TC1 (before resifting was done) (8-72)	Sheet 6	C Frame	5 x 3.5", B/W, includes negative.
C Frame 10 Aug. 18-19, 1972	Sheet 7	C Frame	5 x 3.5", B/W, includes negative.
C Frame 11 Aug. 1972	Sheet 7	C Frame	5 x 3.5", B/W, includes negative.
C Frame 12 Rear Portion of TC1 (8-72)	Sheet 7	C Frame	5 x 3.5", B/W, includes negative.
C Frame 16 Main Walk Way of TC1 (8-72)	Sheet 7	C Frame	5 x 3.5", B/W, includes negative.
C Frame 17 Looking from Mouth of TC1 to Canyon Floor (8-72)	Sheet 8	C Frame	5 x 3.5", B/W, includes negative. "(Notice Trail in Lower Left Hand Corner").
D Frame 2 Sept. 14-16 1972	Sheet 8	D Frame	5 x 3.5", B/W, includes negative.
D Frame 3 Sept. 14-15-16	Sheet 8	D Frame	5 x 3.5", B/W, includes negative.
D Frame 4 Sept. 1972	Sheet 8	D Frame	5 x 3.5", B/W, includes negative.
D Frame 5 Sept. 1972	Sheet 9	D Frame	5 x 3.5", B/W, includes negative.
D Frame 6 Sept. 14-15-16 1972	Sheet 9	D Frame	5 x 3.5", B/W, includes negative.
D Frame 9 Sept. 5-6-7-8 1972	Sheet 9	D Frame	5 x 3.5", B/W, includes negative.
D Frame 10 Sept. 1972	Sheet 9	D Frame	5 x 3.5", B/W, includes negative.
D Frame 11 Sept. 5-6-7-8 1972	Sheet 10	D Frame	5 x 3.5", B/W, includes negative.
D Frame 12 Sept 14-15-16 1972	Sheet 10	D Frame	5 x 3.5", B/W, includes negative.
D Frame 13 Sept. 1972	Sheet 10	D Frame	5 x 3.5", B/W, includes negative.
D Frame 15 Sept. 14-15-16 1972	Sheet 10	D Frame	5 x 3.5", B/W, includes negative.
D Frame 17 Sept. 14-15-16 1972	Sheet 11	D Frame	5 x 3.5", B/W, includes negative.
D Frame 19 Sept 14-15-16 1972	Sheet 11	D Frame	5 x 3.5", B/W, includes negative.
D Frame 20 Sept. 14-15-16 1972	Sheet 11	D Frame	5 x 3.5", B/W, includes negative.
D Frame 21 Sept. 14-15-16 1972	Sheet 11	D Frame	5 x 3.5", B/W, includes negative.
D Frame 22 Sept. 14-15-16 1972	Sheet 12	D Frame	5 x 3.5", B/W, includes negative.
13 G Sheephorn found 9-24-71 TC1-113	Sheet 12	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
13G 1971 9-24-71 TC1-113	Sheet 12	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.

Photo/File Name	Physical Location Continued	Electronic Location Continued	Description
6-10-72 View of TC1 from Below	Sheet 12	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
6-10-72 View of TC1 from Opposite Bank	Sheet 13	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
6-10-72 TC1 From a Ridgetop	Sheet 13	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
6-10-72 View of TC1 from [redacted]	Sheet 13	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
[redacted] Found 7-3-72 See TC1-146 & TC1-147	Sheet 13	TC1 Pictures and Artifacts	5 x 3.5", color, includes slide.
[redacted] Found 7-3-72 See TC1-146 & TC1-147	Sheet 14	TC1 Pictures and Artifacts	5 x 3.5", color, includes slide.
[redacted] Found 7-4-72 See TC1-146 & TC1-147 (2)	Sheet 14	TC1 Pictures and Artifacts	5 x 3.5", color, includes slide.
Looking from Ridgetop Toward TC1 (In Shadow) (7-72)	Sheet 14	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
Taken from Ridgetop of TC1 (In Shadow) (7-72)	Sheet 14	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
Taken from Ridgetop of TC1 (Above Shadow) (7-72)	Sheet 15	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
Ridgetop Looking Down Stray and Tekison Canyons	Sheet 15	TC1 Pictures and Artifacts	5 x 3.5", B/W, includes negative.
[redacted] with Jade Adze	Sheet 15	TC1 Pictures and Artifacts	3.5 x 3.5", B/W.
[redacted] Down at Tekison Camp	Sheet 15	TC1 Pictures and Artifacts	3.5 x 3.5", B/W.
Excavation at TC1 Close-up	Sheet 16	TC1 Pictures and Artifacts	3.5 x 3.5", B/W.
Excavation at TC1 Close-up (2)	Sheet 16	TC1 Pictures and Artifacts	3.5 x 3.5", B/W.
Excavation at TC1	Sheet 16	TC1 Pictures and Artifacts	3.5 x 3.5", B/W.
Basket 1	Sheet 16	TC1 Pictures and Artifacts	5 x 3.5", B/W.
Basket 2	Sheet 17	TC1 Pictures and Artifacts	5 x 3.5", B/W.
Basket 3	Sheet 17	TC1 Pictures and Artifacts	5 x 3.5", B/W.

Tekison Cave 45KT215 Associated Records: Large Photographic Prints
Physical Location: Box 61, (continued)
Electronic Location: Tekison Associated Records\Tekison Cave scanned photos and negatives\Scanned photos\ (continued)

Photo/File Name	Physical Location Continued	Electronic Location Continued	Description
TC1 Large Print 1	Folder 1	Large Prints	8 x 9.5", B/W. Crevice in cave wall.
TC1 Large Print 2	Folder 1	N/A	8 x 9.5", B/W. Duplicate of TC1 Large Print 1.
TC1 Large Print 3	Folder 1	Large Prints	8 x 9.5", B/W. Profile 2.
TC1 Large Print 4	Folder 1	Large Prints	8 x 9.5", B/W. Facing back cave wall. Excavation with several levels and grid markers present.
TC1 Large Print 5	Folder 1	Large Prints	8 x 9.5", B/W. Facing right cave wall. Excavation showing grid markers.
TC1 Large Print 6	Folder 1	Large Prints	8 x 9.5", B/W. Excavation of mat.
350634	Folder 2	Large Prints	8 x 9.5", B/W. Copy of 5 negative film strips. Chipped Stone tools.
350635	Folder 2	Large Prints	8 x 9.5", B/W. Copy of 2 Negative film strips. Projectile points and unrelated religious photos.
350636	Folder 2	Large Prints	8 x 9.5", B/W. Copy of 4 Negative film strips. Chipped stone tools and groundstone.
350652	Folder 2	Large Prints	8.5 x 11", B/W. Copy of 4 Negative film strips. Faunal artifacts.
350653	Folder 2	Large Prints	8.5 x 11", B/W. Copy of 4 Negative film strips. Faunal and textile artifacts.
360654	Folder 2	Large Prints	8.5 x 11", B/W. Copy of 4 Negative film strips. Faunal and textile artifacts.
360655	Folder 2	Large Prints	8.5 x 11", B/W. Copy of 6 Negative film strips. Faunal and textile artifacts.
360656	Folder 2	Large Prints	8.5 x 11", B/W. Copy of 6 Negative film strips. Faunal and textile artifacts.
360657	Folder 2	Large Prints	8.5 x 11", B/W. Copy of 6 Negative film strips. Faunal and textile artifacts.

Tekison Cave 45KT215 Associated Records: Film negatives and Photography of the Tekison Rockshelter sketches.
Physical Location: Box 61, (continued)

Record/File Name	Physical Location Continued	Electronic Location Continued	Description
Film Negatives	Folder 3	N/A	15 Negative film strips and 2 slides. Negatives appear to be those pictured in large size prints (350634, 350634, etc.) Also a14 page document dated 3-8-1976 that *may* correspond to negatives.
Photography of the Tekison Rockshelter	Folder 4	Tekison Associated Records	8 Pages of floor plan sketches with photographic points corresponding to photos from A,B,C, and D frames.

Tekison Cave 45KT215 Associated Records: Original Tags and Bags
Physical Location: Box 61, __(continued)
Electronic Location: N/A

Record/File Name	**Physical Location Continued**	**Description**
CWAS bag # 1-299 (non-inclusive)	Folder 5	Original tags used in excavation with original provenience written on front of tag. CWAS bag # penciled on back of tag.
CWAS bag # 300-399 (non-inclusive)	Folder 5	Original tags used in excavation with original provenience written on front of tag. CWAS bag # penciled on back of tag.
CWAS bag # 1000-1050 (non-inclusive)	Folder 5	Original tags used in excavation with original provenience written on front of tag. CWAS bag # penciled on back of tag.
CWAS bag # 1051-1099 (non-inclusive)	Folder 5	Original tags used in excavation with original provenience written on front of tag. CWAS bag # penciled on back of tag.
CWAS bag # 1100	Folder 5	"7-2-72" written on tape.
CWAS bag # 1105	Folder 5	"Sample location inside" written on tape. Paper with simple drawing of "profile square" 19C, 19D, 18C, 18D showing where grass bedding starts.
CWAS bag # 1110-1137	Folder 5	Original tags used in excavation with original provenience written on front of tag. CWAS bag # penciled on back of tag.
CWAS bag # 1102	Folder 6	Prescription bottle with provenience written on tape adhered to bottle.
Field Bags	Folder 6	Original produce bags used in excavation. 1 example of each bag type was saved.

Tekison Cave 45KT215 Associated Records: CWU-Held Tekison Report ca 1970s
Physical Location: Box 61, __(continued)
Electronic Location: Tekison Associated Records\CWU-held Tekison Report ca 1970s
Names of excavators have been redacted at the request of Tom Johnson [pseudonym].

Record/File Name	**Physical Location Coninuted**	**Description**
Excavation at the Tekison Rockshelter	Folder 7	Two versions, original copies. First version reflects the digital file *Excavation at the Tekison Rockshelter* and includes the sections: "Excavation at the Tekison Rock Shelter," "Cultural Materials," "Cordage Making," and "Basketry." Second version has the sections *Excavation at the Tekison Rockshelter* and "Appendix I." Plus an additional copy of both "Cultural Materials" and "Cordage Making" sections.
Excavation done in R.S. Since July 1972	Folder 7	Includes dates, excavators, and proveniences post 1972 as well as a timeline up to and including 1971.
Appendix I Artifact Catalog	Folder 8	Two original copies.TC1-1 through TC1-219 are documented.
Cordage Classification, Animal Fiber Classification	Folder 9	Three original copies. Sections "Cordage Classification Chart," "Animal Fiber Classification Chart," and "Plant Material Other than Cordage."
Records of Lithic, Bone, Shell, Grass, and Wood	Folder 10	Two original copies. Sections "Records of lithic, bone, shell, grass, wood" and individual artifact catalog for each excavator.
Profiles	Folder 11	Two original copies. Sketches for profiles 1, 2, and 3. Description of profile 4.
[redacted](TC1-173) Lithic Artifacts (unrecorded)	Folder 12	Original copy. Section "[redacted](TC1-173) Lithic Artifacts" has sketches and classification of artifacts. Section "Projectile Points Found by [redacted]" list artifacts by "frame", catalog number, and then have sketches and classifications. Most of the writing appears to be [redacted] handwriting. However, there are additionally numerals (example 111.31) in a different handwriting. The system appears to be a coding system, possibly similar to one used by Dr. William Smith in the Mesa Project.
Sketch Maps	Folder 13	Original copy. Floor plans showing grid system and location of some artifacts.

Tekison Cave 45KT215 Associated Records: CWU-Held Maps and Documents ca 1970s
Electronic Location: Tekison Associated Records\CWU-held Maps and Documents ca 1970s

Record/File Name	Physical Location	Electronic Location Continued	Description
Misc. Documents, Misc. Photos, and Misc Scanned Documents	Box 61, Folder 14		Contents of first of 3 folders found in 2019 from original box 61. Various documents and photo. Includes copies of site form, 1970s correspondence between Dr. William Smith and others, and handwritten document that is presumably from the 2000s "Poss. Roza Rockshelter" which lists contents by box number for 15 boxes.
17611 Tekison Cave	Box 61, Folder 15	N/A	Second of 3 folders found in 2019 from original box 61. Copies and drafts of site form and national register nomination and a sheet of cardstock paper with writing "17611 Tekison Cave Proposed Excavation."
17105-01	Box 61, Folder 15	N/A	Third of 3 folders found in 2019 from original box 61. Labeled 17105-01. This folder was empty in 2019. Unknown if there were documents mixed into other folders or if there are contents that are missing.
Misc. from 45KT215 boxes	Box 61, Folder 16	N/A	Miscellaneous labels, tags, papers, found in or taped onto boxes that were rehabilitated in 2019.
Artifact catalog cards	Box 61, Green box	N/A	Catalog cards of TC1 artifacts. Include sketches. Author unknown.
Oversize Floor Plans	Box 455		Printed floor plans of Tekison Cave floor, some blank, some have artifact location information.
Oversize Profiles	Box 455		Profiles 1, 2, 3, and 4 drawn in 1971.
Plan map part 1, Plan map part 2	Box 455		Floor plan drawn on multiple large rectangles of cardboard.

Appendix G: Associated Records on Loan Finding Aid

Tekison Cave 45KT215 Associated Records: Avocational-Held Records
Physical Location: Box 456
Electronic Location: Tekison Associated Records\Avocational-held Associated Records
Names of excavators have been redacted at the request of Tom Johnson [pseudonym].

Record/File Name	Description
Excavation Register	Field notes binder with loose leaf sheets; typed and handwritten. Contents include descriptions of some units, profile and elevation notes, artifacts recovered before 9-17-71 (artifact sketches and sometimes provenience), list of finds by excavator, remarks (to do lists), records of photographs started 1972.
[redacted] (TC1-173) Lithic Artifacts	Loose papers inside original green "ACCOGRIP" binding. This is the original, hand-drawn and written, document that is included in the *Excavation at the Tekison Rockshelter* document. Projectile point/stone tools are sketched and classified. The classification system (example 111.31) resemble coding system used in the Mesa Project (Smith 1977).
Excavation at the Tekison Rockshelter Rough Draft	Handwritten drafts and typed drafts with notes for sections in *Excavation at the Tekison Rockshelter*. One note is written on the back of "Sagebrush Rope Frame (by [redacted]). While the Sagebrush Rope Frame document is unrelated to Tekison it does contain clues for other [redacted] sites.
Cordage and Projectile Point analyses	Graph showing Z and S twist cordages. List of classification (example Corner Notched 111.32) categories and included catalog numbers, handwritten on yellow lined paper.
Miscellaneous Notes	Includes field notes which were presumably in the "Excavation Record"
[redacted]'s Basket Framed Photo	Framed Photo of "[redacted]'s" Basket, now at the Wanapum Heritage center. B/W.
Onionskin map	Large onionskin map. Currently, left folded as was originally.
Grids and Scales	2 grid maps and paper photo scale used in photographing artifacts from Tekison. One map is folded as was originally.
Tags from UNK 2 [redacted] collections.	Non-Tekison, tags say Q-1, Q-2, Q-4. Were loose in box with artifacts and could not be reassociated. Stored in poly bag with tag.
[redacted] Photo Flipbook	Black and white photos of [redacted] family and collecting sites that are not Tekison. Photos are still in original plastic film sleeves, tape is failing.
Letter to [redacted]	Unrelated to Tekison. Handwritten on onionskin paper. Written by [redacted] 1977.

Appendix H: Recommended Access and Use Policy

Central Washington University
Department of Anthropology and Museum Studies
Tekison Cave (45KT215) CWU-held Recommended Collection Access and Use Policy

Purpose: The CWU Department of Anthropology and Museum Studies mission is to "educate people about cultural and biological diversity of humans in all places and at all times" (CWU 2020). This recommended policy contributes to that mission by providing appropriate access and use of the collection while maintaining physical and cultural care.

Definitions:

Access: Access can take many forms including but not limited to viewing objects and records on exhibit, online, in publication, or in person.

Use: Use is a type of access which refers to physical utilization of objects and records including but not limited to touching, moving, photography, physical analysis, or destructive analysis.

Role: Role is an individual's position in relation to access and use of collection:

Title	Description
Staff	Department archaeology collections manager[1], designated department faculty and staff, and approved CWU students.
Owner	Washington Department of Fish and Wildlife (WDFW), a state government agency
Descendant Communities	Concerned tribes, which have been identified as: the Confederated Tribes of the Colville Reservation, the Wanapum Band of Priest Rapids, and the Confederated Tribes and Bands of the Yakama Nation.
Researcher	A person utilizing the collection for research.
Public	Members of the general public not belonging to above categories.

Protocol:

Authority:

Access and use, outside of routine collections care and preventative conservation, must be approved by staff, the owner, and descendant communities. Staff will first contact the owner for access and use requests. In collaboration with the owners, the department will

[1] Currently, the department archaeology collections manager is not a dedicated, full-time position, but an additional role of a faculty member.

inform descendant communities and receive approval for any access or use of the collection. The department will defer to descendant community response on collection policies and practices for access and use.

General Protocol: Access and use will be granted based on department capabilities (e.g. staffing), legality, cultural and ethical concerns, preventative conservation requirements (e.g., handling). In addition, the type of access and use granted is based on the user's role and intent of access and use. Roles and intents may be fluid and interchangeable, for example a staff member may be request use of the collection as a researcher.

Regardless of role or intent, users will handle objects and records using best museum practices, with the consideration of cultural care needs.

Use must be supervised by staff at all times. For example, if a researcher is also a staff member, they should not act as their own supervisor.[2]

Intent of Access and Use:
Cultural: Cultural access and use needs would be determined by descendant communities, but could include ceremonial activities or fostering heritage.

Education: The public is limited to access through possible future exhibits, digital, and print publications. If such exhibits are developed, utilitarian items in the collection should be used to educate about daily life practices of the people who used the artifacts. They should ideally be displayed in conjunction with natural resources, like native roots used for food, and along with questions and information to increase engagement.

Research: Defined by federal regulations at 45 CFR 46.102 as "a systematic investigation including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." Research requests may include destructive or non-destructive analysis.

[2] The department will do its best to adhere to this protocol, though funding and staff limitations may be a hardship.

Appendix I: Radiocarbon Dating Report

DirectAMS
RADIOCARBON DATING SERVICE
measure more. learn more.

Report: **1979-036737-036738** 27 January 2020

Customer: 1979
Pat Lubinski
Central Washington University
Department of Anthropology
400 E. University Way
Ellensburg, WA 98926-7544
USA

Samples submitted for radiocarbon dating have been processed and measured by AMS. The following results were obtained:

DirectAMS code	Submitter ID	Sample type	Fraction of modern		Radiocarbon age	
			pMC	1σ error	BP	1σ error
D-AMS 036737	1588	bone (collagen)	89.89	0.29	856	26
D-AMS 036738	1589	bone (collagen)	89.88	0.26	857	23

Results are presented in units of percent modern carbon (pMC) and the uncalibrated radiocarbon age before present (BP). All results have been corrected for isotopic fractionation with an unreported $\delta^{13}C$ value measured on the prepared carbon by the accelerator. The pMC reported requires no further correction for fractionation.

Appendix J: Obsidian Sourcing Report

Northwest Research Obsidian Studies Laboratory Report 2020-04

X-Ray Fluorescence Analysis of an Obsidian Artifact from Tekison Cave (45-KT-215), Kittitas County, Washington

Alex J. Nyers
Northwest Research Obsidian Studies Laboratory

A single obsidian artifact from Tekison Cave (45-KT-215), Kittitas County, Washington, was submitted for energy dispersive X-ray fluorescence trace element provenance analysis. The sample was prepared and analyzed at the Northwest Research Obsidian Studies Laboratory under the accession number 2020-04.

Analytical Methods

X-Ray Fluorescence Analysis. Nondestructive trace element analysis of the sample was completed using a Thermo NORAN QuanX-EC energy dispersive X-ray fluorescence (EDXRF) spectrometer. The analyzer uses an X-ray tube excitation source and a solid-state detector to provide spectroscopic analysis of elements ranging from sodium to uranium (atomic numbers 11 to 92) and in concentrations ranging from a few parts per million to 100 percent. The system is equipped with a Peltier-cooled Si(Li) detector and an air-cooled X-ray tube with a rhodium target and a 76 micron Be window. The tube is driven by a 50 kV 2mA high voltage power supply, providing a voltage range of 4 to 50 kV. During operation, the tube current is automatically adjusted to an optimal 50% dead time, a variable that is significantly influenced by the varying physical sizes of the different analyzed samples. Small specimens are mounted in 32 mm-diameter sample cups with mylar windows on a 20-position sample tray while larger samples are fastened directly to the surface of the tray.

For the elements that are reported in Table A-1, we analyzed the collection with a 3.5 mm as well as an 8.8 mm beam collimator installed with tube voltage and count times adjusted for optimum results. Instrument control and data analysis are performed using WinTrace software (version 7) running under the Windows 7 operating system.

The diagnostic trace element values used to characterize the sample are compared directly to those for known obsidian and fine-grained volcanic (FGV) sources reported in the literature and with unpublished trace element data collected through analysis of geologic source samples (Northwest Research 2020a). Artifacts are correlated to a parent obsidian, FGV, or basalt source (or geochemical source group) if diagnostic trace element values fall within about two standard deviations of the analytical uncertainty of the known upper and lower limits of chemical variability recorded for the source. Occasionally, visual attributes are used to corroborate the source assignments although sources are never assigned solely on the basis of megascopic characteristics.

Results of Analysis

X-Ray Fluorescence Analysis. The obsidian artifact analyzed by X-ray fluorescence methods was correlated with a known obsidian source, Whitewater Ridge, Oregon. The locations of the site and identified source are shown in Figure 1. Analytical results are presented in Table A-1 in the Appendix and are summarized in Table 1 and Figure 2. The analyzed artifact is shown in Figure 3.

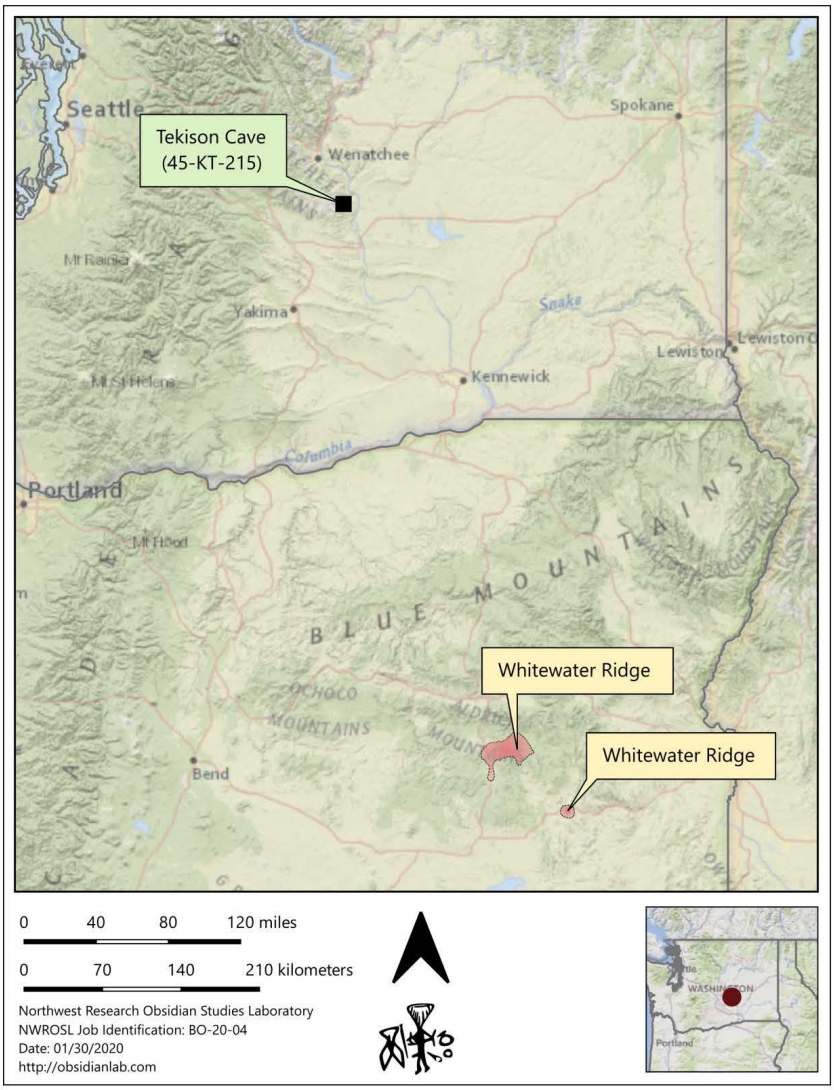


Figure 1. Locations of the project site and source of the obsidian artifact.

Table 1. Summary of results of trace element analysis of the project specimen.

GEOCHEMICAL SOURCE	N=	PERCENTAGE
Whitewater Ridge	1	100
TOTAL	**1**	**100**

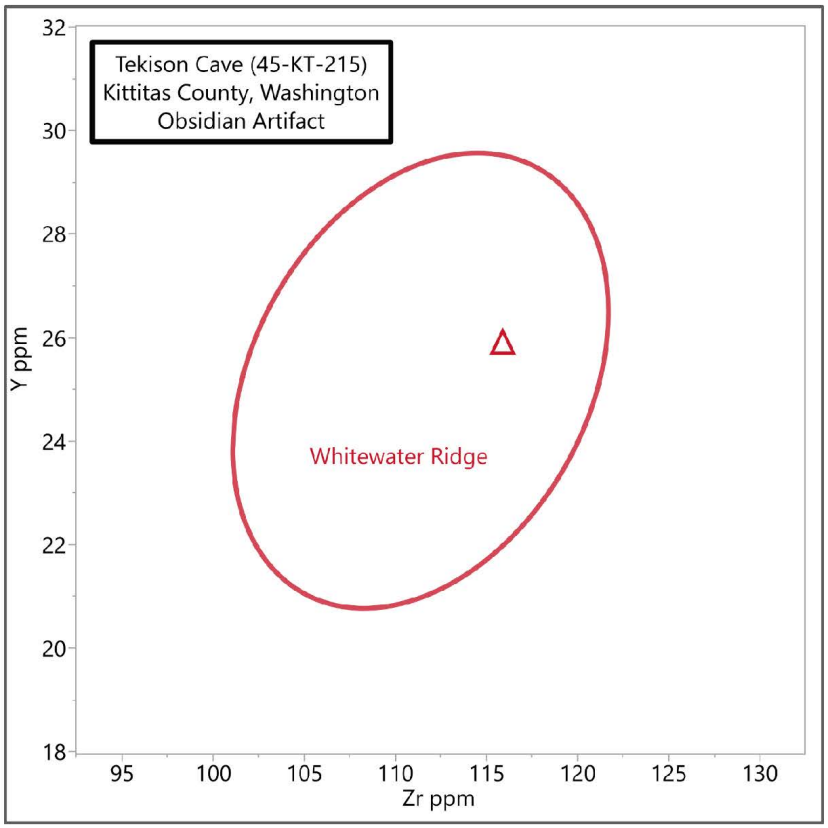


Figure 2 - Scatterplot of zirconium (Zr) plotted versus yttrium (Y) for the analyzed artifact. Ellipse represents geologic source elemental distribution.

Figure 3 - Specimen 1 (catalog number 1460)

Information concerning the location, geologic setting, and prehistoric use of the obsidian source identified in the current investigation may be found at www.sourcecatalog.com (Northwest Research 2020b).

References Cited

Northwest Research Obsidian Studies Laboratory
2020a Northwest Research Obsidian Studies Laboratory World Wide Web Site (www.obsidianlab.com).

2020b Northwest Research U. S. Obsidian Source Catalog (www.sourcecatalog.com).

Appendix

Results of X-Ray Fluorescence Analysis

Northwest Research Obsidian Studies Laboratory

Table A-1. Results of XRF Studies: Tekison Cave (45-KT-215), Kittitas County, Washington

			Trace Element Concentrations						
Site	Specimen No.	Catalog No.	Rb	Sr	Y	Zr	Nb	Ba	Geochemical Source
Tekison Cave	1	1460	141	68	26	116	10	1423	Whitewater Ridge
			± 3	2	2	3	2	41	
NA	RGM-1	RGM-1	153	111	29	232	12	836	RGM-1 Reference Standard
			± 4	3	2	3	2	28	

All trace element values reported in parts per million; ± = analytical uncertainty estimate (in ppm).
NA = Not available; ND = Not detected; NM = Not measured; * = Small sample; FGV = Fine-grained volcanic specimen.